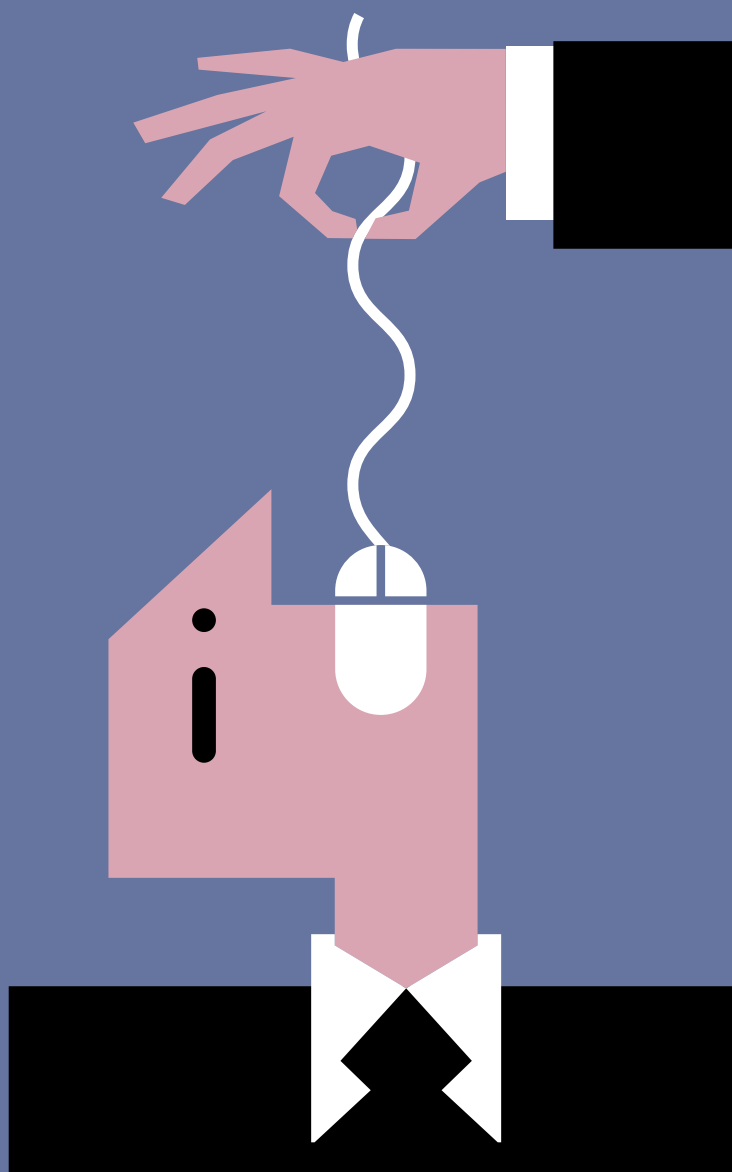
KRISTINE DE VALCK

Virtual Communities of Consumption

Networks of Consumer Knowledge and Companionship



Virtual Communities of Consumption: Networks of Consumer Knowledge and Companionship

Virtuele connecties tussen consumenten:
Netwerken van consumptiekennis en kameraadschap

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"*Computer-mediated communication is not just a tool;*
It is at once technology, medium, and engine of social relations.
It not only structures social relations,
it is the space within which the relations occur
and the tool that individuals use to enter that space."

Steven G. Jones
CyberSociety 2.0, 1998: p. 11-12

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Acknowledgments

The key ingredients that communities are made of are people, interpersonal relationships, information, advice, empathy, support, friendship and fun. As a researcher, I find communities fascinating material to investigate. As a human, I find them indispensable for my joy in life. My focus on communities has resulted in this dissertation, as well as in my commitment to many ties, networks, and friendships. The following chapters report the outcomes of my academic exploration of the virtual exponent of the community phenomenon. Here, I'd like to dedicate some words of thanks to all those real life communities that have directly contributed to this dissertation, or that have indirectly affected it by contributing to my happiness.

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Chapter 1

Introduction

1.1 INTRODUCTION

With the diffusion of computer and information technologies throughout businesses and homes, the field of marketing has transformed significantly. Worldwide, people have adopted the Internet as an information, communication, transaction, and distribution channel. Today, the global Internet population consists of around 934 million people (ClickZ Stats, September 10, 2004).[1] Internet usage patterns differ across regions and countries (e.g., Nielsen//Netratings' Global Internet Index). Nevertheless, market research consistently finds that two online activities are undertaken most frequently by a large number of global Internet users: emailing and searching for information (e.g., Fallows 2004; CBS Statline 2003). Because the Internet connects people and disseminates information at an unprecedented speed and scope, it is clear that also its impact as an online social network and knowledge reservoir is profound.

Marketers have to deal with consumers who increasingly interact with other consumers through the Internet. Electronically based discussion forums, bulletin boards, list servers, chat rooms, and newsgroups provide consumers worldwide with the ability to share their knowledge, experiences, and opinions. The popularity of electronic consumer exchanges is reflected in the vast number of online gathering places, as well as the number of contributions that are made every day (Hauben & Hauben 1999; Horrigan & Rainie 2002; Madden 2003). The Pew Internet & American Life Project has estimated that, in 2003, 10% of U.S.-based Internet users contributed content to online communities (Lenhart, Horrigan & Fallows 2004). Similarly, Forrester Research, Inc. reports that 11% of European Internet users can be considered as active online content creators (Jackson, Favier, Cremers & Van Kruijsdijk 2003). Although exact numbers are not available, we may assume that the percentage of Internet users who search for, read, and use the online information provided by other consumers is much larger (e.g., Rheingold 1993).

We know that traditional reference groups, such as family, friends, neighbors, and colleagues, affect consumer behavior (Blackwell, Miniard & Engel 2001). In the context of

[1] This number represents the number of people that actually go online in any given month, rather than the number of people that have Internet access.

making purchase decisions, consumers generally regard peers' advice as more trustworthy and valuable than marketer-generated information (Price & Feick 1984; Swartz & Stephens 1984; Herr, Kardes & Kim 1991). Thus, interpersonal influence tends to increase with the strength of the social tie between people (Granovetter 1973). With the advance of the Internet as a platform for virtual communities of like-minded individuals, it is interesting to find out how consumer behavior is affected by those with whom the consumer closely associates online. Virtual communities are formed around all possible topics and shared characteristics (Hagel & Armstrong 1997). This dissertation focuses on virtual communities of consumption, which are explicitly centered upon consumption-related interests. They can be defined as "affiliative groups whose online interactions are based upon shared enthusiasm for, and knowledge of, a specific consumption activity or related group of activities" (Kozinets 1999, p. 254).

Within these virtual communities of consumption, participants can obtain product information, learn about the consumption activity in general, share experiences, and develop social relationships with other members. When making a purchase decision, participants may turn to the virtual community to gather information, to ask for advice, or to review the opinion of expert users. After the purchase has been made, they may communicate their own experiences with the consumption activity to the community. The result is an ongoing process of interpersonal influence and online word-of-mouth recommendation. This dissertation research is undertaken to investigate this process and its effect on the consumer decision process. In the remainder of the chapter, we will address our objective and research questions. Furthermore, we discuss scientific and managerial relevance. Finally, the structure of the dissertation is explicated.

1.2 OBJECTIVE AND RESEARCH QUESTIONS

Over the past 10 years, marketing research has increasingly investigated the effects of the Internet as an information, communication, transaction, and distribution channel on consumer behavior. A plethora of articles, papers, and conference proceedings have addressed topics related to marketing in the age of the Internet. Dedicated journals have been launched (e.g., *International Journal of Electronic Commerce, Journal of Interactive Marketing*, *Journal of Computer-Mediated Communication*) and special Internet-related issues have been commissioned (e.g., *Journal of Advertising* Spring 1997 and 1998; *European Journal of Marketing* July 1998; *Marketing Science* Winter 2000). However, in spite of practitioner interest (e.g., Hagel & Armstrong 1997; Williams & Cothrell 2000), few academics have specifically examined the role of virtual communities in marketing.

Up to date, marketing research into virtual communities[2] has primarily centered on three issues. (1) Why do people participate in and contribute to communities? (e.g., Bagozzi and Dholakia 2002; Dholakia, Bagozzi & Klein Pearo 2004; Hennig-Thurau, Gwinner, Walsh & Gremler 2004). (2) What different member types and roles within communities can be discerned? (e.g., Kozinets 1999; Alon, Brunel & Schneier Siegel 2005), and, (3) How can we make money out of communities? (e.g., Balasubramanian & Mahajan 2001; Bughin & Zeisser 2001; Rothaermel & Sugiyama 2001; Dellarocas, Farag Awad & Zhang 2004). Besides the exploration of these issues, researchers have also started to propagate the virtual community as a research site to gain insights in the drivers of consumer behavior by monitoring ongoing member interactions and analyzing the symbols, stereotypes, values, and norms that are part of their discourse (e.g., Kozinets 1997, 2002a; Boush & Kahle 2001; Catterall & Maclaran 2002; McAlexander, Schouten & Koenig 2002). In this respect, researchers often adopt an ethnographic approach, and, consequently, the method of netnography has gained ground in consumer research.

Although all these research efforts are laudable and valuable contributions to our understanding of the phenomenon of virtual communities in the context of marketing issues, many knowledge gaps still exist. This dissertation picks up one particular research topic that needs further advancement, i.e., interpersonal influence within virtual communities. There is substantial anecdotal evidence that participation in online communities influences consumer behavior (e.g., Rheingold 1993; Jolink 2000; Oostveen 2001). Various research papers suggest that virtual communities act as important reference groups for their individual participants (e.g., Kozinets 1997, 2002a; Bickart & Schindler 2001; Rothaermel & Sugiyama 2001; Chevalier & Mayzlin 2003). For some participants, the virtual community may supplement existing primary and secondary reference groups, but for others, it may actually replace traditional reference groups (Constant, Sproull & Kiesler 1996).

The essential difference between virtual and traditional reference groups is that involvement in the virtual community is a voluntary and conscious choice, whereas membership in traditional communities may be imposed, among other things, by chance of birth or proximity of residence (Bagozzi & Dholakia 2002). People are free to join the virtual community of their choice, for example, because they find like-mindedness among its members. This may make the virtual community a much more influential reference group than traditional communities that one not necessarily feels deeply connected to. As information exchange between consumers on the Internet continues to grow exponentially, spheres of influence will become increasingly virtual. Marketers are challenged to cater to

[2] We use a broad definition of virtual communities, thus including all marketing research efforts that have investigated some type of online consumer recommendation platform.

this development. It is therefore important to acquire systematic knowledge about the role of virtual communities in the context of consumer decision-making.

The objective of this dissertation is to investigate various aspects of virtual community participation and its effects on the consumer decision process. This is done by means of three exploratory studies that each addresses a different aspect of community participation and influence. Data collection took place in two rounds using two different methods, i.e., an online survey and a netnography. In both cases, we collected data in one and the same virtual community. Thus, this dissertation not only presents systematic research into community participation and influence, but it can also be read as an in-depth inquiry into consumer behavior within a particular virtual community, i.e., SmulWeb (www.smulweb.nl). SmulWeb is a Dutch virtual community organized around culinary matters. Its topics of interest include recipes, restaurants, kitchen utensils, food products, wine, dieting, and culinary events. The community has been online since 1998 and it counts nowadays approximately 160,000 members. It is important to note the community's content is entirely generated by the members. The administrators take care of the infrastructure, but the members provide all the content. The community's database with their contributions is large and extensive. In Chapter 4, we will further elaborate on the community's characteristics. Below, we discuss each research project and the guiding research questions in more detail.

Study 1

The first study examines the determinants and effects of community influence on consumer decision-making. The goal of the study is to generate systematic insight in interpersonal influence online in the context of virtual communities of consumption. Our research framework is based upon existing theories of interpersonal influence and word-of-mouth recommendation. We explore in what respect these theories can be extended from the traditional context to the computer-mediated context of virtual communities. Which factors related to interpersonal influence in the offline context are associated with interpersonal influence online? Additionally, we are interested in the effects of community influence on the various phases of the consumer decision process. Does community influence manifest itself only in an increased knowledge base or does is also affect consumers' needs, preferences, and satisfaction with consumption decisions? Because community influence on the consumer decision process may be different for various types of decision processes, we compare results for consumer decision-making regarding three different consumption experiences.

Study 2

The second study examines community participation behavior. The goal of the study is to classify community members on the basis of how they make use of the community, and, consequently, the extent to which they are influenced by it. The most widely used typology of virtual community members distinguishes between lurkers and posters, i.e., members who only read posts versus members who make contributions to the community's content. This simplistic typology ignores the diversity that can be found in *how* members lurk and post (i.e., how often? for how long? what do they get and what do they bring?). Our study classifies community members on five behavioral dimensions that discern them in terms of visit frequency, visit duration, and online behavior. The resulting member typology is profiled on other variables related to community membership and general consumer characteristics, and the extent of community influence on decision-making is compared across member types. Thus, we arrive at a more realistic and richer representation of community participation behavior, that enables us to formulate marketing strategies that fit the profile and particular way in which each member type participates in the virtual community.

Study 3

The third study examines online forum discussions by means of a netnographic analysis. The goal of the study is to analyze how the forum discussants communicate with and influence each other, and to gain insight in their discourse with respect to the community's focal consumption activities. The forum discussions are to a large extent generated by the community's core member group. Because of their extensive involvement in and contribution to the community, core members play an important role in determining the valence of the community as a reference group and source of word-of-mouth recommendations. Our overall objective is to present an illustration of online discussion practices, and to point out what marketers may learn from tracking and analyzing the core members' discourse about the community's topics of interest.

1.3 SCIENTIFIC RELEVANCE

The scientific relevance of this dissertation is threefold. It can be explicated by the following quote of Steven G. Jones that serves as the motto of this dissertation: "Computer-mediated communication is not just a tool; it is at once technology, medium, and engine of social relations. It not only structures social relations, it is the space within which the relations occur and the tool that individuals use to enter that space." (Jones 1998, p. 11-12). The

contribution of this dissertation lies in its scientific investigation of the Internet as a social space, as a medium, and as a technology.

By considering virtual communities as a new social space, we build upon the work of others who have treated the Internet as an entirely new phenomenon in the field of marketing research (e.g., Hoffman, Novak & Chatterjee 1995; Hoffman & Novak 1996; Alba, Lynch, Weitz, Janiszewski, Lutz, Sawyer & Woods 1997; Degeratu, Rangaswami & Wu 2000). To understand what the phenomenon of virtual communities means for the way companies do business, we first need to know how consumers make use of these communities. Why and how do they participate? Why and how do they contribute content and about what? Various researchers have started to address these issues. Kozinets (1999), for example, comes up with a conceptual classification of community member types based on their social and topical involvement in the community and makes suggestions about marketing strategies on the basis of these member types. Bagozzi and Dholakia (2002) and Dholakia et al. (2004) investigate how individual-level and goup-level motivations determine community participation, thereby discerning between small group-based communities and network-based communities. Laing, Hogg & Newholm (2004) investigate interactions in a health care community and discuss the subsequent effects on the relationship between consumers and health care systems. Systematically investigating these issues is the necessary first step that has to be undertaken in a still nascent marketing research area. We hope to make a contribution in this respect with both a quantitative and qualitative inquiry into one particular virtual community of consumption.

By considering virtual communities as a medium that is used by consumers to exchange information, to share experiences, and to develop social relationships, we build upon existing theories on interpersonal influence. Research activities that have been undertaken in the traditional context include, among others, the effects of consumer conformity on choice behavior (Venkatesan 1966), reference group influence (Bearden & Etzel 1982; Reingen, Foster, Johnson Brown & Seidman 1984; Rae Bachmann, Roedder John & Rao 1992), the effects of word-of-mouth (Johnson Brown & Reingen 1987; Herr et al. 1991), and opinion leadership (Rogers 1983; Venkatraman 1990). Systematic research into the effects of online interpersonal influence on consumer behavior in real life is almost completely lacking. Some papers address the issue as a sideline, but only Bickart and Schindler (2001) have undertaken a systematic investigation. In an experimental setting, they test for the differential effects of consumer-generated online information versus marketer-generated online information on consumer behavior. Obviously, this topic needs further exploration before a solid knowledge base is achieved. This dissertation contributes to this by explicitly centering upon interpersonal influence in a virtual community setting, thereby using existing theories about

reference group influence and investigating whether these existing theories can be extended from the traditional context to the computer-mediated environment of virtual communities.

Finally, by exploiting the technological features of the virtual community that served as our research site, we contribute to the furthering of using Internet-facilitated techniques to understand consumer behavior. Of course, online surveys are already a reasonably well-established research method within the field of marketing research. In general, it is often asserted that they only serve well in case of short questionnaires (e.g., Mehta & Sivadas 1995; Bachman, Elfrink & Vazanna 1996; Ranchhod & Shou 2001; Deutskens, De Ruyter, Wetzels & Oosterveld 2004). Nevertheless, our lengthy questionnaire and large number of respondents show that this online research method can also be successfully applied for more extended studies. The method of netnography is less well established. Kozinets (2002a) has formally introduced the method in marketing research by explaining and describing the procedure in the *Journal of Marketing Research*. Around the same time, Catterall and Maclaran (2002) described the method in the *Journal of Consumer Behaviour*. Since then, no netnographic analyses have been published in the major marketing journals, although conference proceedings make clear that researchers indeed have picked up the method (e.g., Hair & Clark 2003; Langer 2003; Maclaran, Hogg & Curasi 2003). This dissertation may serve as an example of both the application of the method and the results that can be obtained with it. In the concluding chapter, we will give directions for an improved usage of this method based on our experience.

1.4 MANAGERIAL RELEVANCE

During the nineties and the early 21st century, at the height of the Internet bubble, Internet experts and management consultants extolled the virtues of online interactivity between consumers. Numerous business press articles reported about success stories and stressed the potential benefits that can be gained by exploiting an online community platform. Regularly, virtual communities are hyped as the killer application for online marketing (e.g., Oostveen 2001; Brown, Tilton & Woodside 2002). As a result, companies engage in all kinds of projects and experiments to obtain experience and to learn about the possibilities of virtual communities for marketing purposes. Obviously, some of these companies have done very well. For example, iVillage, the largest U.S.-based online community for women, has nowadays 16 million unique visitors per month. It has reached total revenue of $16.5 million in the second quarter of 2004 (iVillage Inc. financial report, August 3, 2004). On the other hand, many companies have struggled to make a profit out of community facilities (Bughin

& Hagel 2000; Bughin, Hasker, Hilton-Segel & Zeisser 2001). And many have abandoned their online community projects altogether (Hagel 1999).

Nevertheless, if we consider the revenues that can be generated by exploiting online consumer interactions and the benefits that can be enjoyed due to the loyalty of a strong consumer community, then we understand how business interest in virtual communities remains. Interest is even on the rise now that the Internet market has stabilized and money is available again for investments. Consequently, companies have started to develop new community-based business models, that exploit social networking software (Houtman 2003). In doing so, they are backed up by an abundance of management literature on the dos and don'ts of virtual community design and management (e.g., Hagel & Armstrong 1997; Kim 2000; Preece 2000; Powazek 2001). However, solid research on which to base investment and business decisions is not widely available. While the existing body of management literature addresses the issue of successful strategies for community building, little attention is paid to the underlying process of virtual community member behavior and the effects of virtual community participation on consumer behavior in real life.

With the in-depth and systematic exploration of SmulWeb that addresses various aspects of community participation and influence, we aim to provide practitioners with a rich insight in the phenomenon of virtual communities and their role in marketing. Specifically, Study 1 generates insights in which factors are associated with community influence. Thus, it enables us to make recommendations on how to organize the community so that the conditions under which community influence is likely to occur are optimized. Study 2 results in a more realistic and richer representation of community member participation than the widespread lurker-poster dichotomy. Insight in the different ways that members make use of the community enables marketers to make more informed and strategic decisions about whom to target and how to target them. Study 3 exemplifies what can be learned when online consumer discussions are systematically monitored and analyzed. Our netnographic analysis gives insight in converging, differing, and clashing value systems associated with cooking and eating, which has significance for various interest groups such as marketers, advertising agencies, producers of food products and kitchen appliances, restaurant keepers, and nutritionists. The forum discussants also exchange thoughts about the functioning of the community, offering many relevant insights for community managers on how to improve the organization and exploitation of the community.

1.5 STRUCTURE OF THE DISSERTATION

This dissertation is based upon three empirical studies that are reported in Chapters 5, 6, and 7 respectively. The empirical chapters build upon each other, but they may also be read separately. The other chapters of the dissertation provide the reader with conceptual, theoretical, and methodological information about the research area and the particular studies. We briefly address the content of the chapters to give the reader an overview of the dissertation's structure.

Chapter 2 equips the readers with basic knowledge about virtual communities in general. We discuss the concept of community; we describe the origination and development of virtual communities; we give a classification of virtual community types; and, we conclude with a reflection upon the role of virtual communities in marketing.

Chapter 3 introduces the theoretical background of the dissertation. We go into existing theories of interpersonal influence and discuss how they can be applied to the context of interpersonal influence online. We explicate the peculiarities of communication and interaction between people in a computer-mediated environment.

Chapter 4 starts with an introduction into the research site that we used for both data collections. Subsequently, we discuss questionnaire development, data collection procedure of the online survey, and sample characteristics. Note that Chapters 5 and 6 are based on data collected by means of the survey. Chapter 7 is based on the netnography. Details about this research method are discussed in Chapter 7.

In Chapter 5, we report the research framework, analyses, and results of Study 1 that addresses the issue of interpersonal influence online. In Chapter 6, we present the research framework, analyses, and results of Study 2 that classifies virtual community members in terms of their participation behavior. Chapter 7 describes the conceptual foundations, method, and results of the netnographic analysis of the focal community's online discussion forums.

Finally, in Chapter 8, we conclude with a contemplation of the main findings about virtual community participation and its effects on the consumer decision process. Furthermore, we discuss implications, limitations, and future research opportunities.

Chapter 2

Research Area
Virtual Communities

2.1 INTRODUCTION

Virtual communities, online communities, Internet communities, computer-mediated communities, electronic communities, and cyber communities. Communities of interest, communities of relationship, communities of fantasy, communities of practice, transaction communities, brand communities, consumer communities, and support communities. Tribes, boards, forums, rooms, rings, lists, dungeons, and portals. ARPANET, Usenet, Internet, intranet, email, chat systems, conferencing systems, graphical worlds, electronic auctions, and online payment systems.

The terms related to the research area of this dissertation seem inexhaustible. Their abundance indicates that the field is broad and varied. This situation causes confusion about the concept of virtual communities. Most people are not exactly sure what they are or what they entail. In this chapter, we provide the reader with background information that places communities in a conceptual, historical, typical, and practical context. We have not set out to achieve full transparency, which will require a dissertation in itself. However, after reading this chapter, one will be better able to understand, assess, and appreciate the list of above-mentioned labels.

This chapter is organized as follows. Section 2.2 explicates the community concept and provides a definition. Section 2.3 describes the history of the origination and development of virtual communities. In Section 2.4, we discuss the various types of communities and the labels that are used for denomination. Finally, Section 2.5 highlights the role of virtual communities in marketing by addressing the benefits that both consumers and producers may gain from them.

2.2 THE CONCEPT OF COMMUNITY

There is a wide variety of definitions of the term virtual community. The confusion surrounding the term is mostly caused by the different meanings of community. The notion of community is core to social thought. Its intellectual history is lengthy and abundant. From

an anthropological perspective, the traditional community could be defined as a collective of kinship networks, which share a common geographic territory, history, and value system, usually rooted in a common religion (Jones 1997). However, the concept of community has shifted from terms of physical proximity to terms of social networks. Community does not only refer to a set of social relationships that operate within specified boundaries or locales, but it has an ideological component as well. It refers to a sense of common character, identity or interest (Fernback & Thompson 1999). A community is made up of its member entities and the relationships among them. Communities tend to be identified on the basis of commonality or identification among their members, whether a neighborhood, an occupation, a leisure pursuit, or devotion to a brand. Communities are instrumental to human well-being. Through communities, people share essential resources that may be cognitive, emotional, or material in nature (McAlexander et al. 2002).

Howard Rheingold is the first to coin the term virtual community and his definition is probably the most frequently quoted one. Rheingold defines virtual communities as "social aggregations that emerge from the Net when enough people carry on public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace" (Rheingold 1993, p. 5). The term virtual community quickly has gained ground as a loosely applied label for various online social gatherings. This has spurred academic debate about what exactly constitutes community in cyberspace, and about whether a virtual community can be a true community in the traditional, sociological meaning of the concept (e.g., Garton, Haythornthwaite & Wellman 1997; Jones 1997; Paccagnella 1997; Fernback & Thompson 1999; Liu 1999; Wellman & Gulia 1999). Discussions about the appropriateness of the community concept to describe online groups focus on the assumption that most online relations are characterized by a lack of commitment and dedication (Watson 1997). Everyone may enter a chat room, pretending to be a completely different person than in reality, listen in into the ongoing conversation or maybe add a reaction, leave and never return. Moreover, communication via computers is often called inferior, because social cues like gestures, intonation, and facial expressions are lacking (e.g., Kiesler, Siegel & McGuire 1984; Sproull & Kiesler 1986). Consequently, many researchers use the adjective virtual in the sense of a community that is unreal and insincere.

The premise that people may form online communities has led to the exploration of the contexts within which virtual communities are formed, their norms of behavior, and the specific practices that hold them together. Despite the initial scepticism, research efforts have made apparent that the three core components of traditional community can often also be found online, i.e., consciousness of kind, shared rituals and traditions, and a sense of moral responsibility (cf., Watson 1997; Kozinets 2001; Muniz & O'Guinn 2001; Bagozzi & Dholakia 2002). Furthermore, research into computer-mediated communication has shown

that it is indeed possible to exchange emotions and build affectionate relationships via computer networks (e.g., Walther 1992, 1995). Traditional communities tend to have a social control function, which is not particularly liberating. In contrast, virtual communities have a relatively hedonistic ethos, which puts pleasure and bounded individuality before conformity (Muniz & O'Guinn 2001). Also different from traditional communities, membership in virtual communities is driven by volitional choice. Virtual communities are formed out of common interest, not common obligation.

For the purpose of this dissertation it is not so relevant to establish whether virtual communities deserve to be called communities in the traditional meaning of the term. What matters is that online social gatherings are a reality; they do occur every day, regardless of whether they are termed communities or not. Thus, we take up the definition suggested by Jones (1997, p. 6), which is primarily aimed at distinguishing sustained social interaction and communication among people in a group-communication structure from ad hoc, one-to-one online contact. By doing so, we distance ourselves from the group of management consultants and Internet experts who have adopted the term virtual community to describe even the most minimal interactivity between people via the Internet.

A class of computer-mediated group communication that takes place within a specified communication structure is labeled a virtual community when the following four conditions are met: (1) a minimum level of interactivity, (2) a variety of communicators, (3) a minimum level of sustained membership, and (4) a virtual common-public-space where a significant number of computer-mediated group communications occur.

2.3 A BRIEF HISTORY

In order to better understand the concept of virtual community it is necessary to have some knowledge of the historical background. The emergence of virtual communities is closely linked to the development of Internet technology. The evolution of the Internet begins with a computer network experiment run by the U.S. Department of Defense Advanced Research Projects Agency (ARPA). The major initial motivation for the ARPANET was to develop a communication system with no obvious central command and control point, but that enabled surviving points to re-establish contact in the event of a (nuclear) attack on any one point. Besides this military purpose, ARPANET was also meant to improve and increase computer research productivity through academic resource sharing (Hauben & Hauben 1999). During the 1960s, ARPA-funded groups worked on different aspects of interactive computing at various research centers in the United States (e.g., MIT; Stanford Research Institute; UCLA;

UCSB; Bolt, Beranek and Newman, Inc.; and the Rand Corporation). Packet switching was developed as the protocol to exchange information through the network; all messages were broken up into equal size packets, which were transmitted, interspersed and then reassembled. In this way, short, medium, and long messages got transferred with minimum delay (Hauben & Hauben 1999). By the end of 1969, host computers at diverse locations were connected together into the initial ARPANET. Many computers were added quickly to the ARPANET during the following years. In mid 1973, the network extended across the Atlantic, linking computers in Norway and Great Britain.

ARPANET was a success. One of the surprising developments of the ARPANET was the great popularity of email among the ARPA-researchers (Hauben & Hauben 1999; Naugthon 1999). Email allowed an individual to send a message directly to another person, but it could also be used to send messages to a group address. While the ARPANET was funded for scarce resource sharing (allowing researchers at distant sites to log into and run programs on each other's computer networks), a survey in 1973 revealed that three-quarter of all the traffic on the Net was electronic mail (Naugthon 1999). Moreover, some of the messages were not related to computing at all. As soon as the ARPANET went online, network users started sending emails that went far beyond the requirements of maintaining the network. As a result, the first virtual communities were initiated by computer scientists who worked on the development of ARPANET. The first large community was SF-LOVERS, an email list of ARPA-researchers who engaged in public discussions about science fiction (e.g., exchanging book and movie reviews). It started appearing publicly on ARPANET in the late 1970s (Rheingold 1993).

At the same time that the ARPANET was being experimentally validated and widely used among a subset of computer science researchers, other networking technologies were being developed, especially because of the perceived usefulness of email. By the mid-1970s, computer networks began to spring up wherever funding could be found. Most of these early networks were purpose-built. They were intended for, and largely restricted to, closed communities of scholars (Leiner, Cerf, Clark, Kahn, Kleinrock, Lynch, Postel, Roberts & Wolff 2000). For example, the U.S. National Science Foundation funded several networks for computer scientists at universities without Department of Defense contracts. These networks, like the Electronic Information Exchange System (EIES, introduced in 1976) and the Computer Science Network (CSNET, introduced in 1980), quickly spread to other members of the academic community besides computer scientists (Hauben & Hauben 1999). Next to the NSF and various U.S. and international government-funded activities, interest in the commercial sector was beginning to grow (Leiner et al. 2000). IBM sponsored BITNET, a network for scholarly and academic discussions not limited to the sciences. Huge corporate networks were developed at, for example, AT&T and IBM (Rheingold 1993). The main

objective of these early communities was professional information and experience exchange. Thus, they can be labeled communities of practice. However, as is shown by the case of the SF-LOVERS list, the networks were also used to create email lists organized around interests not related to academic research or professional topics. These are the first communities of interest (Hagel & Armstrong 1997).

Besides the email and discussion lists that grew out of the ARPANET technology, other computer communication systems played a role in the emergence of virtual communities. We first discuss the emergence of conferencing systems. To join the ARPANET, political connections and money were needed. Consequently, less fortunate computer scientists decided to collaborate on the development of the poor man's ARPANET (Hauben & Hauben 1999). Usenet was initiated in 1979, when graduate students from Duke University and the University of North Carolina at Chapel Hill created software to link together UNIX-based computer systems. Usenet was a conferencing system that was available to everyone who had access to the UNIX operating system (which in those days was available at a low cost to the academic and computer research community). The fundamental unit of Usenet is the individual posting. The address of the posting is not to an individual or mailing list, but to the topic of discussion, known as a newsgroup. At first, Usenet was mainly used by UNIX tool builders to identify bugs in new technology and to propagate ways to deal with these problems (i.e., a community of practice). One of the first communities of interest that developed on Usenet was the newsgroup NET.chess about computer chess (Hauben & Hauben 1999).

The growth of Usenet was biological – slow at first, and then exponential. Early 1981, connections were created between ARPANET and Usenet. ARPA-mailing lists became available for Usenet users. This attracted a wave of new users that spurred the development of newsgroups (Hauben & Hauben 1999). In 1979, there were three sites passing around approximately two articles per day. In 1980, there were 15 sites and 10 articles per day, and in 1981, there were a 150 sites and 20 articles per day. Nowadays there are thousands of newsgroups available around the world. Some of them are local to an organization, a city, a state, or a nation. Some are global. Newsgroups are divided into several types, each having its own prefix: alt (alternative); biz (business); comp (computer); misc (miscellaneous); rec (recreation); soc (societies); sci (science); and talk (general discussion) (Rheingold 1993). In fact, Usenet is a large collection of communities of interest consisting of huge knowledge reservoirs. Mailing lists also have a wide range of discussions, but they are available to a much smaller sized group (Hauben & Hauben 1999). Usenet draws it strength from being a global, peer-to-peer network that is free from commercial exploitation (it may not be used for profit making). Usenet has continued the important breakthroughs of the ARPANET with

respect to the ability to collaborate and to utilize dispersed sources by making access to these computer-mediated relationships available to the common people.

Usenet is a fancy conferencing system with a unique form of social organization. A variant on this conferencing system are bulletin board systems (BBSs). Bulletin board systems were developed by computer hobbyists who interconnected their personal computers via telephone lines using a modem. At first, the BBS community was restricted almost exclusively to microcomputer hobbyists whose interests included all kinds of questions regarding the functioning of (personal) computers. An exception was the CommuniTree BBS in Santa Cruz, California, which went online in 1978. It focused on social and spiritual matters (Rheingold 1993). During the 1980s, the prices for modems dropped. When commercial online service providers entered the market, people outside of the college campus and computer technology-savvy sphere also gained access to conferencing systems as Usenet and bulleting board systems. The networking technology was soon upgraded from local clusters to worldwide connections. This enabled people to communicate and interact online with others who are distant in space and time, but who share a common interest. Most conferencing systems allowed participants to create topical groups. The result was the emergence of a wide variety of communities of interest devoted to topics ranging from religion to sex, and health care to Star Trek (Rheingold 1993; Kollock & Smith 1999). The first people to adopt this new communication medium were more than average politically engaged, socially active, and intellectually oriented. In his book *The Virtual Community* (1993), Howard Rheingold describes his experiences with the WELL, an inexpensive public online service based in the San Francisco bay area. His book has become a must-read in the field of virtual communities, because it presents the first in-depth analysis of an early virtual community's evolution.

The WELL was launched in 1985 as an exponent of the *Whole Earth Catalogs* and the *Whole Earth Review* that were aimed at communards who explored alternate ways of life. The Whole Earth crowd constituted of a core population from the beginning. However, a couple of other populations of early adopters made the WELL an open system, as well as a specific expression of one side of San Francisco culture. One such element was the subculture created because of the PC revolution: computer wizards and hackers. Another cultural element that made up the initial mix of the WELL were the Deadheads, the community around the band the Grateful Dead. Several technology-savvy Deadheads started a Grateful Dead conference on the WELL. This conference turned out to be such a success that for the first several years, Deadheads were by far the single largest source of income for the enterprise. Rheingold describes the ways in which the WELL is used and experienced by its members. He extols the virtues of the supportive community spirit that is initially enhanced, because WELL members were able to meet each other in the real world due to the

local character of the service. The WELL linked to the Internet in 1992 and it still exists to date. Like Usenet, it is a network of communities of interest. Members can initiate or join a conference in which they can discuss a specific topic of interest. Typically, 16 percent of the members contribute 80 percent of the words in any conversation, but many people listen in invisibly and all are free to join (Rheingold 1993).

Email lists and conferencing systems are asynchronous forms of computer-mediated communication. Chat systems, on the other hand, enable one person to send typed words directly to the screen of another person, who is logged onto the same system. Initially, text chat involved one-to-one communication. In 1988, a programmer at the University of Oulu, Finland, wrote the first version of Internet Relay Chat (IRC), a multi-user, synchronous communications tool designed to be facilitated by the Internet. Chat systems developed into one of the most popular forms of communal interaction on the Internet (Rheingold 1993). In numerous chat rooms around the world people gather together for small talk or serious conversations. Also based on synchronous computer-mediated interaction is a special kind of virtual community; the multi-user dungeon, also known as multi-user dimension or domain (MUD). With the growing availability of computer networks on university campuses in the late 1970s, MUDs were developed to allow people to play fantasy computer games with other people instead of against computers. In these communities of fantasy (Hagel & Armstrong 1997), people interact with each other in real time to build imaginary worlds and engage in role-plays. In adventure MUDs, participants compete against each other to collect points that give them technical and social power. In social MUDs, participants just interact with and extend the virtual environment rather than compete for power over it (Beaubien 1996; Reid 1999). As the computing power and network bandwidth increased, text-based MUDs were upgraded to graphical worlds, in which text chat is integrated with visual representations of each participant and some representation of a place (Bruckman 1996; Rheingold 1993; Kollock & Smith 1999).

During the 1980s, ARPANET, conferencing and chat systems that had separate origins grew together into one system with many parts: the Internet. Large-scale access to the Internet was greatly enhanced by the development of the World Wide Web by Tim Berners-Lee at the Geneva-based European Organization for Nuclear Research (CERN) in 1990-1991. This user-friendly interface onto the Internet caught on in 1993, when a freely available Web browser (Mosaic, later Netscape Navigator) started the web revolution (Gauntlett 2000). With the advance of the World Wide Web, Internet usage in business and private context has exploded, and so has the number and variety of virtual communities. An innovative type of community that has emerged is the community of transaction, in which buying and selling is facilitated (Hagel & Armstrong 1997). These communities abound in the business-to-

business market, but the concept (especially the online auction) has also proven to be successful in the business-to-consumer, and consumer-to-consumer markets (e.g., eBay, Amazon, and Letsbuyit). Furthermore, spurred by publications such as Hagel and Armstrong's *Net Gain: Expanding Markets through Virtual Communities* (1997), companies try to exploit communities in a commercial context.

Before, the majority of virtual communities were self-initiated by people who share an interest in a particular topic and who had access to a network of connected computers. Email lists are typically owned by a single individual or small group. Most email lists are run as open, non-commercial spaces, allowing anyone to join the list and anyone to contribute to it. MUDs are also owned by the individual or the group that provides the hardware and software and the technical skill needed to maintain the system. Like most of these communities, Usenet and BBSs have no intention to make a profit and advertising is barred (Kollock & Smith 1999). With the increasing popularity of the Internet, companies started to create virtual communities as a new way to organize their customer relationship management. They introduced communities around specific products, brands, and consumption activities to facilitate communication with and among their target customers. Also, portals were created that function as gateways to the Internet by organizing information into sections that contain links to relevant web pages (e.g., Yahoo, MSN, iVillage, and Ilse). These portals usually offer free services such as message boards, chat rooms, transaction facilities, e-mail accounts, and space to build personal web pages. In exchange for using this community software, users provide personal information that is exploited for commercial purposes. Oftentimes, users are exposed to advertising, which also generates profits for the administrator.

Dot-com companies selling products or services that used, or were somehow related to, the Internet proliferated in the late 1990s. The business model of these companies relied on network effects; they gave their product away in the hope that they could later charge for it. In this respect, offering free community software was expected to result in huge online databases of community members that formed easy accessible, ready-made markets for e-commerce and advertising purposes. Investments in the dot-com sector soared. However, in late 2000 and through 2001, the Internet bubble burst. A few established dot-com companies survived the turmoil, but the majority of the dot-coms went bankrupt without ever having made a profit (http://encyclopedia.thefreedictionary.com: June 23, 2004). For some time, due to the shakeout and the general economic recession, companies had less confidence in and capital for community initiatives. In spite of the economic slump, the Internet gains ground worldwide as a communication, interaction, information, and transaction medium. Email continues to be the killer application, enhancing the connections between family and friends (Horrigan 2001). Virtual community participation is less widespread; for example, in 2000-

2002, nine in 10 online Americans have used email, whereas one-quarter has participated in chat rooms and online discussions (Madden 2003).

Table 2.1
Key Moments in the Development of Virtual Communities

1969	ARPANET is launched
1972	The first email is sent and mailing lists are created
1976-1977	Creation of EIES scientific virtual community
1978-1981	Development of the first Usenet newsgroups, BBSs, and MUDs
1980-1981	Development of CSNET and BITNET
1980-1985	Introduction of commercial online service providers (e.g., CompuServe, the Source, and AOL)
1985	Whole Earth 'Lectronic Link (the Well) is launched
1988	Development of Internet Relay Chat
1990-1991	Development of World Wide Web
1993	Publication of *The Virtual Community: Homesteading on the Electronic Frontier* by Howard Rheingold
1994-1995	Introduction of Netscape; Introduction of communities of transaction (e.g., Amazon.com)
1997	Publication of *Net Gain; Expanding Markets through Virtual Communities* by John Hagel III and Arthur G. Armstrong
1998-1999	Portals add community features (e.g., Yahoo and MSN)
2000-2001	The Internet bubble bursts
2002-2004	Latest trend: exploitation of social networking software

Nevertheless, virtual communities of all sorts are important online peer-to-peer networks that keep on expanding across the globe (Hauben & Hauben 1999). The number of contributions of consumers, patients, hobbyists, experts, professionals, and other ordinary people to the content that is available on the Internet is exploding (Lenhart et al. 2004). At the same time, people increasingly turn to the Internet to search for information about all sorts of topics, thereby making extensive use of the specialized knowledge reservoirs of mailing lists, Usenet newsgroups, BBSs, forums, and chat rooms (Madden 2003). Having overcome the reluctance to invest in Internet-related initiatives, companies have begun to develop new community-based business models. The latest trend is social networking software that offers people the opportunity to search for contact online with the goal to meet offline. A good example is the exploitation of online dating communities; members subscribe for a small fee

to a database full of potential partners. Sites such as Meetup.com and Friendster.com aim to organize local interest groups, making money out of advertisements of cafes and restaurants that serve as meeting places (Houtman 2003).

Table 2.1 summarizes the key moments in the development of virtual communities. Overall, we may conclude that since their first emergence until to date, virtual communities have proven to be a popular means of interacting with others and it is not likely that this will change in the future.

2.4 A TYPOLOGY OF VIRTUAL COMMUNITIES

The brief history of their development makes clear that the field of virtual communities is broad and varied. Virtual communities are organized around a wide range of topics. Besides, virtual communities vary greatly due to (1) their main purpose, (2) the computer-mediated context in which they occur, and (3) their organizational structure. Researchers have come up with numerous labels and typologies to distinguish one community type from the other. The most well known typology of virtual communities is introduced by Hagel and Armstrong in their managerial handbook *Net Gain* (1997). They distinguish communities on the basis of the purpose for which they are organized: communities of relationships, communities of interest, communities of fantasy, and communities of transaction. Each type is said to address a basic need. In essence, their typology reflects the various key developments in the emergence of virtual communities. ARPA-researchers form the first communities of relationships that are today known as communities of practice. Conferencing systems as Usenet and other bulletin board systems cause the wide spread of the virtual community of interest. Community of fantasy is an explanatory label for the multi-user dungeon. Finally, at the time of the publication of *Net Gain*, communities of transaction are the latest trend in the development of virtual communities.

Instead of developing a classification, others introduce one specific label to describe a particular type of community. Examples are the community of ethnicity (e.g., Mitra 1999), the community of consumption (e.g., Kozinets 1999), the brand community (e.g., McWilliam 2000; Muniz & O'Guinn 2001; McAlexander et al. 2002), the tourist community (e.g., Wang, Yu & Fessenmaier 2002), and the support community (e.g., Warisse Turner, Grube & Meyers 2001). These labels are useful to detail and limit the focus of research, but they do not add new, distinct categories to Hagel and Armstrong's generic typology. In fact, most communities can be categorized as a mixture of a community of relationships and interest that combines social contact with information exchange, whether that is based on a similar demographic background, a consumption-related activity, a specific brand, a certain travel

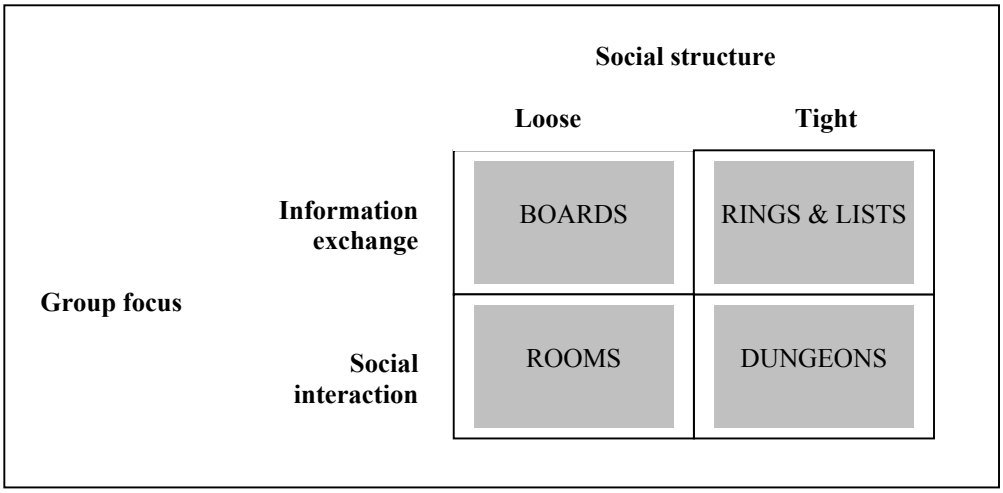
destination, or a medical problem. The only specific label that has caught on as a distinct category is the community of practice (e.g., Wenger 1998; Wenger, McDermott & Snyder 2002; Hildreth 2004). A community of practice is formed by a group of people within or between organizations to share what they know, to learn from each other regarding some aspects of their work, and to provide a social context for that work (Wenger 1998).

By extending Hagel and Armstrong's typology with the community of practice, the main purposes that communities serve are covered. Consequently, we may discern the following types of communities. Communities of relationships are formed to contact people that are in the same situation, for example with regard to an illness, pregnancy, being a parent, or being single. The main purpose of these communities is to connect people for social contact and support. Thus, the recent social networking community initiatives that are aimed at real-life contact can be labeled communities of relationships. Communities of interest are formed to share knowledge and experience. Compared with the communities of relationships, the main purpose of these communities is more functional and informational oriented. Good examples of communities of interest are recommendation sites such as Epinions and Citysearch, and user-to-user support communities like the communities formed around the open source system Linux. Communities of practice combine the functions of support and information exchange in a specific context, namely the professional environment. Communities of fantasy are formed to play virtual games in graphical fantasy worlds. Hence, their main purpose is related to recreation. Finally, communities of transaction are formed to manage supply and demand. It is important to keep in mind that these categories are not mutually exclusive (cf., Wellman, Salaff & Dimitrova 1996; Wellman & Gulia 1999; Burnett & Buerkle 2004). Thus, a virtual community can be, for example, directed at social contact, information exchange, as well as transaction.

The second way to distinguish virtual communities is to look at the computer-mediated context in which they occur. As the overview of virtual community development has illustrated, communities are supported by various software systems: email lists, asynchronous boards, synchronous chat rooms, text-based or graphical fantasy worlds, electronic auctions or online buying functionalities, as well as integrated Internet environments that combine several of these software systems. Due to the characteristics of the software systems, the type of community that emerges in the various computer-mediated contexts differs. Kozinets (1999) takes this as a starting-point for a classification based on computer-mediated context using the dimensions group focus (information exchange vs. social interaction) and social structure (loose vs. tight) to further characterize each type of community (see Figure 2.1). Lists and boards are both focused on information exchange. Lists, however, are defined by a tight social structure, whereas boards usually have a loose

social structure. In contrast, rooms and dungeons are focused on social interaction. Rooms combine the focus on social interaction with a loose social structure. Dungeons are defined by a tight social structure.

Figure 2.1
Classification of virtual communities based on computer-mediated context (Kozinets 1999)



More insight into the plethora of virtual community types can be gained when we combine Hagel and Armstrong's typology based on purpose with Kozinets' typology based on computer-mediated context. Consequently, we find that the most clear-cut community type is the community of fantasy that is based on a specific purpose as well as a specific computer-mediated context, i.e., playing games in a text-based or graphical fantasy world known as dungeon. Furthermore, communities of interest are likely to occur in boards, whereas communities of relationships are likely to occur in rooms. Think of, for example, a discussion forum organized around investment issues versus a chat room that is used as a dating site. Communities of practice are traditionally based on email-lists. For marketing academics, the ELMAR-list serves as a good example of a community of practice that ties people who work in the same field by sharing knowledge, giving advice, calling for papers, and informing each other about journals and conferences. Note that this categorization of communities combining purpose and computer-mediated context is not normative. Communities of interest, relationships, and practice may all occur through lists, boards, and chat rooms. Besides, many communities combine information exchange with social interaction, while the social structure amongst the participants is eventually more dependent on individual participation behavior than on the computer-mediated context per se.

Kozinets' classification leaves communities of transaction out of consideration. They can neither be classified under the group focus information exchange nor social interaction. Like communities of fantasy, they combine a specific purpose with a specific software system that facilitates buying online (e.g., PayPal or electronic auction software). Because of their loose social structure, they could be placed under the blocks of boards and rooms in Kozinets' schematic overview of community types. In that case, the category of transaction orientation should be added to the dimension group focus. The only type of virtual community that is not covered by the existing classification yet is the community that uses an integrated Internet-platform offering a mixture of boards, chat rooms, and email or transaction facilities. As such, the group focus of these communities is usually not limited to one specific purpose. Also, the social structure amongst the participants varies with the functionalities they mostly use. It is this kind of community that further complicates the classification of communities based on purpose and supporting software.

Overall, we may conclude that no definite and well-defined typology of virtual communities exists or can be developed. Nevertheless, researchers may use the suggested distinctions to give a generic description of the type of communities that they study. When doing so, there is, however, a third aspect of virtual community classification that should be taken into account, i.e., their organizational structure. A classification of communities based on organizational structure is important, because member participation in and community influence on consumer decision-making is likely to differ with the way the community is organized. Many dimensions of the organizational structure of virtual communities may be discerned; we mention the six most salient dimensions.

Commercial vs. Non-Commercial

Virtual communities vary in the degree of commercialism. A commercial virtual community generates revenues by means of advertising or sponsorship. An example is iVillage that is sponsored by Unilever and that contains many banners. Non-commercial virtual communities can be found, for example, in academic circles. Usenet-based newsgroups are also typically non-commercial communities. The degree of commercialism might influence community members' attitudes towards the credibility of the community's content.

Endorsed vs. Non-Endorsed

Virtual communities can be linked to companies, institutes, associations, societies or other types of organizations. Examples are the many brand communities that are initiated and administered by the producer. At the same time, brand communities are also initiated by consumers independent of, and sometimes even in conflict with, the producing company.

Think, for example, of the many fan communities dedicated to Star Trek or the anti-Nike communities. Even if an endorsed virtual community is not commercially exploited by the facilitating organization, consumers might feel that the information provided in an endorsed virtual community is not free from biased tenor.

Open System vs. Closed System

Many virtual communities are open for everyone who is interested in joining, but sometimes access is only limited to a specific group of people. An Intranet is an example of a closed community system. Communities that only provide access or information retrieval after payment are also closed community systems. Group dynamics are expected to differ with the degree of a community's openness. In this respect, factors such as the number, the variety, and the expertise of community members play a role.

Linked to Real-Life Community vs. Being Truly Virtual

Online communities can be based on, somewhat based on, or not related to traditional, physical communities. Communities that are based on physical communities are usually geographically focused and organized around news, events, people and locations in a village or region. Face-to-face meetings occur regularly. Members of communities that are somewhat based on a physical community have periodic meetings, e.g., in academic communities, researchers may meet at conferences. Also many hobby-based communities meet periodically at competitions, swap meetings, or retreats. Communities that are truly virtual have no face-to-face meetings. Members may be too geographically dispersed or prefer anonymity. The balance between off- and online meetings between the members is likely to affect what the virtual meeting place is used for and how the members relate to each other online.

Regulated vs. Non-Regulated

Virtual communities differ with respect to their level of regulation that may range from strict regulation to no regulation at all. Some companies that provide virtual community space hire professional moderators who have a full-time job starting, freezing, encouraging and intervening in discussions. Other communities organize voluntary hosts who spend only a couple of hours a week surveying discussions. However, many communities have no assigned moderator or host at all. This can be a problem when a community is faced with hostile, racist, or other unwelcome contributions. Group dynamics are likely to be influenced by regulation; therefore, we need to take the degree of regulation into account when examining the social interaction among virtual community members.

Registered Participation vs. Non-Registered Participation

Virtual communities vary in the degree in which participant registration is required. Although in open system communities everybody may be allowed to read the discussions, usually some form of registration is needed in order to actively participate. Registration requirements vary from providing an e-mail address to a full personal record. A special aspect of the registration requirement is member anonymity. Communities may vary in the degree in which personal information of their members (e.g., real names) is publicly exposed. We expect that group dynamics will be influenced by the degree in which community members are aware of each other's identity.

2.5 THE ROLE OF VIRTUAL COMMUNITIES IN MARKETING

It is obvious that virtual communities have a lot to offer to consumers and producers alike. As off their first appearance, communities have been used by people to share product information and consumption experiences. Moreover, consumers have used virtual communities to bond with like-minded individuals worldwide who share their passion for a certain consumption activity (e.g., motorcycling), or a specific brand (e.g., Macintosh). Marketers' interest in virtual communities has been raised with the development of the World Wide Web and the subsequent large-scale commercial exploitation of the Internet environment. Marketers build company-managed (brand) communities or they get involved in existing, independent or third-party managed, communities that focus on consumption-related activities. These consumer and producer-initiated communities have been labeled communities of consumption by Kozinets (1999).

Kozinets defines communities of consumption as "affiliative groups whose online interactions are based upon shared enthusiasm for, and knowledge of, a specific consumption activity or related group of activities" (Kozinets 1999, p. 254). Note that this definition does not include any reference to the community's purpose, computer-mediated context, or organizational structure. Communities of consumption are not limited to a specific class of communities; they are merely limited to a certain class of topics. SmulWeb can be labeled a virtual community of culinary consumption. The field of communities of consumption is as broad and varied as the overall virtual community landscape. In this paragraph, we describe the values that communities of consumption, in general, may offer to consumers and to producers. By doing so, we highlight the relevance of virtual communities for marketing practice and research. Table 2.2 summarizes the values of virtual communities for consumers and producers.

Table 2.2
Virtual community benefits for consumers and producers

Value for consumers	Value for producers
Third party product/service information	Insight in consumer attitudes & behaviors
Aggregated & archived consumer knowledge	Real-time, cheap, unobtrusive observation
Access to expert users	Access to enthusiastic/heavy/loyal users
Improved decision-making/product usage	Informed segmentation strategies
Stage for expression	Profit from exploitation
Fellowship & commonality	Propagating loyalty
Consumer agency	Insert/defend/alter/reinforce brand meanings
Strength of buying power	Dialogue with consumers
Greater voice	Consumer input in product development
Sense of ownership	Broad relationship with consumers

Value for consumers

The single most important benefit for consumers is the wealth of information that can be found within communities. Consumers share their knowledge and experience with regard to products, services, brands, producers, and retailers. The community can be consulted for usage suggestions and advice about choice options. Also, consumers exchange best prices and they may help each other troubleshooting when a product fails. The fact that information is provided by other consumers increases the credibility, trustworthiness, and relevance; after all, people assume that other consumers have no ulterior or commercial motivated reason to share information (e.g., Price & Feick 1984; Herr et al. 1991; Fitzgerald Bone 1992). Moreover, the community offers access to expert users. Thus, consumers can benefit from expertise that might not be available in their real-life reference groups. Because member contributions are archived, communities may develop into large consumer knowledge reservoirs in which multiple opinions about and experiences with the same product or service are aggregated. Altogether, using the community as an information source may result in improved decision-making and product usage.

Virtual communities also provide value to consumers as a stage for expression. People share their knowledge and experience for various reasons. They may be very involved in a consumption activity and gain pleasure out of using the community as an outlet for expressing their enthusiasm (cf. Venkatraman 1990). Furthermore, people provide information to others out of self-enhancement, for example, to gain attention, to show their connoisseurship, or to assert their status and superiority (Dichter 1966). Another reason for

telling others about consumption experiences is dissonance reduction. Doubts after a purchase may decrease when one can vent them (Gatignon & Robertson 1985). Similarly, dissatisfied consumers may use the community to express their negative emotions. Despite the critical contributions, most communities show a significant degree of devotion to and involvement in the focal consumption activity and its related products and brand(s). It is the fellowship and commonality amongst like-minded enthusiasts that forms another important lure for consumers to participate in virtual communities. In this respect, communities offer social and affectual benefits to their members.

Virtual communities of consumption represent a form of consumer agency. Empowered by information exchange and strengthened by social interactions, consumers may use their community membership to actively judge consumption offerings, and increasingly resist marketing efforts they find invasive or unethical (Kozinets & Handelman 1998). Communities may even undertake actions for the betterment of their members. As a group, community members have strength of buying power. Thus, they may engage in negotiating deals with producers or retailers to get the best value out of products and services. In this way, instead of being targeted, it is the consumer who can target the vendor (Hagel 1999). Companies that recognize the shifting power and that adapt their strategies accordingly will allow community members a greater voice in the production and marketing of their products and brands. When consumers feel that their comments and feelings are taken into account, their sense of ownership will increase. This heightens their devotion to the consumption activity and its related products; they may gain more pleasure, be more satisfied, and, eventually, show more loyalty and reciprocity by means of positive word-of-mouth.

Value for producers

Virtual communities not only act as rich information sources for consumers, but also for producers. Member contributions and discussions bring to light consumer needs, values, norms, attitudes, and behavior. Producers may learn how they use the product, what they like about it and what not, and which complementary products are used. Moreover, insight can be gained in the relationships between personal identity, social identity, and brand identity (Kozinets 1999). What does the product mean to the community as a whole and to the various consumer groups that can be discerned within it? Thus, by analyzing member-generated online content, producers will be better able to understand the processes underlying buying behavior. A major advantage of communities is that they can be monitored real-time, in an unobtrusive way. This allows for cost-effective reality checks and sensing of market forces compared with traditional focus groups, surveys, and interviews.

Through communities, producers have access to groups of enthusiastic, heavy, and loyal consumers. This is not one homogeneous group. Some members will be longtime product

enthusiasts and expert users; others are novices that have a starting or passing interest. Recognizing these different user groups by monitoring community participation and contribution can inform segmentation strategies that are based on loyalty (not only in terms of retention or switching, but in cultural and experiential terms of depth of experience and emotional devotion) or fragmentation of tasteworlds (e.g., exquisite versus simple) (Kozinets 1999). Knowledge about the profiles of different consumer groups can also be used as input for developing customized interactive advertising campaigns. Exploiting the community like this in a clever way may generate considerable profits (Hagel 1999).

Producers may benefit from communities without actively participating in them. Nevertheless, active involvement offers extra value. The devotion of product or brand enthusiasts can be nurtured and strengthened by supplying the community with background information and news flashes, by organizing sweepstakes and online contests, and by offering members the possibility to act as a test market (Hagel & Armstrong 1997; Kim 2000; McAlexander et al. 2002). In this way, adherence can be built and extended, and loyalty can be propagated. Producer involvement in the community also facilitates a dialogue with customers. Consumers are active creators of brand meaning and within communities these meanings are negotiated (Muniz & O'Guinn 2001). Actively engaging in these discussions will enable the producer to insert, defend, alter, and reinforce brand meanings. Moreover, consumer dissent can be detected and reacted upon right away. Ultimately, producers should exploit the community as a platform for collaboration marketing: using it to really listen to their customers, inviting their input in the production process, and granting them special deals. The result is the development of a broad relationship between producer and consumers that is much stronger than the mere transaction-oriented relationship (Hagel 1999).

This chapter has sketched the diverse field of virtual communities. The focus has narrowed from the broad concept, via a historical overview and various classifications, to the virtual community of consumption and its role in marketing. The SmulWeb community that is the focal research site of this dissertation is such a virtual community of consumption. It can be classified as a community of interest organized around the topic of culinary matters. It is supported by an integrated Internet environment that consists of a central home page, databases with recipes, restaurant reviews, food product tips, kitchen utensils reviews, and culinary events, subcommunities, member home pages with guest book facilities allowing members to send each other public messages, an email function for private message exchange between members, six discussion forums, and one chat room. The community, that has been online since 1998, was developed and marketed by an independent company that created virtual communities for third parties, but in 2004 it was sold to another independent

company that exploits portals. Thus, SmulWeb is a commercial, non-endorsed community. It is operated as an open system; everyone with Internet access can become a community member. However, it is necessary to register an email address and user name in order to use and participate in the community. The role and interference of the administrators in this community is small. Community management edits the central home page, and takes care of the technical and logical infrastructure, but the members provide all of the community's content. Member contributions are not regulated; the administrators only interfere when there is a high-rising dispute between the members. Yearly, a small circle of members organizes a gathering, but most community members never meet in real life, thus, the SmulWeb community is a truly virtual.

Currently, the SmulWeb community consists of 160,000 registered members. Its database contains approximately 200,000 recipes, 11,600 articles, and 11,500 restaurant reviews. Together, members and database form an unbelievably large and extensive culinary reference group and source of information about cooking and eating. Some members make daily use of the community, for example, to get a recipe for dinner or to talk with other members in the community's discussion forums. Some members just come by every now and then, looking for a recipe or review. Some members are dedicated suppliers of information, and some only get what other members have contributed. This dissertation is undertaken to explore how this community functions as a reference group and site of interpersonal influence, and what the effects are on consumer decision-making. The insights gained from our three studies will enable marketers and community managers to make better-informed decisions on how to exploit the community as a marketing tool and consumer-to-consumer platform. Before we turn to the empirical chapters, we address the theoretical background of our investigations, i.e., traditional theories of interpersonal influence. Furthermore, we discuss the peculiarities of the online environment and how they might affect word-of-mouse.

Chapter 3

Theoretical Background Interpersonal Influence

3.1 INTRODUCTION

There are many factors that influence consumer decision-making and buying behavior. To name but a few: product characteristics, vendor characteristics, marketing stimuli, individual differences, and environmental influences. Most of these factors have been systematically examined and their influence has been studied. With the advance of the Internet, many researchers have started to conduct conceptual and empirical studies to examine the generalizability of these existing theories to the context of computer-mediated environments. This dissertation follows suit by investigating the issue of interpersonal influence in the context of virtual communities.

In general, consumers attach importance to the opinion of others while making purchase decisions. They talk about their purchase intentions to family members, relatives, friends, and colleagues and maybe ask for their advice. As a result, consumers presumably are influenced in their decision-making because they interact and communicate with others. Research activities that have investigated this process of interpersonal influence in the traditional context address, among other things, the effects of consumer conformity on choice behavior (Venkatesan 1966), reference group influence (Bearden & Etzel 1982; Reingen et al. 1984; Rae Bachmann et al. 1992), the effects of word-of-mouth (Johnson Brown & Reingen 1987; Herr et al. 1991), and opinion leadership (Rogers 1983; Venkatraman 1990).

Interaction and communication among virtual community members takes place through a technological interface. This means that the primary relationship is not between the sender and the receiver of information, but rather with the technology-mediated environment (Hoffman & Novak 1996). Moreover, all computer-mediated communication is radically textualized. Observable social cues, which serve as important facilitators of interpersonal communication in face-to-face settings, are reduced online (Sherry & Kozinets 2000). Both features change the way in which social information is processed, and, subsequently, influence interpersonal effects (Walther 1992, 1995).

This chapter discusses existing theories of interpersonal influence and the extent to which they can be applied to an online setting. Specifically, we review the literature on

reference group influence in Section 3.2. Next, in Section 3.3, we address word-of-mouth communication and the role of the opinion leader. We end the chapter with a paragraph that highlights the peculiarities of communication and interaction in computer-mediated environments that are likely to affect the process of interpersonal influence. Each section brings forth specific research questions that have served as the starting point for our investigations in Chapters 5, 6 and 7.

3.2 REFERENCE GROUP INFLUENCE

A reference group is any person or group of people who significantly influences an individual's behavior (Bearden & Etzel 1982). Thus, reference groups can be individuals like family members, colleagues, sportsmen, stars, and political or religious leaders. Reference groups can also be groups of individuals, such as classmates, local communities, rock bands, or professional associations. Usually, reference groups are classified in primary versus secondary groups, formal versus informal groups, and aspirational versus dissociative groups (Blackwell et al. 2001).

In general, primary reference groups exert most influence. Participation in such groups is cohesive and motivated, and based on unrestricted face-to-face communication, for example, a family. Members tend to exhibit a high degree of similarity in beliefs and behavior (Witt & Bruce 1972). Secondary reference groups also have face-to-face interaction, but it is more infrequent, less comprehensive, and less influential, for example, a fishing club (Ward & Reingen 1990). Formal reference groups are characterized by a defined structure and requirements for membership, whereas informal reference groups have less structure and tend to be based on friendship or shared interests, for example a trade union versus a circle of football friends (Blackwell et al. 2001). Aspirational reference group influence comes forth out of a desire to adopt the norms, values, and behavior of others who one wants to associate with. The desire to belong to the group can be realistic (membership is anticipated), or it can be entirely symbolic (membership is not anticipated). In contrast, dissociative reference groups are groups from which one tries to avoid association (Blackwell et al. 2001).

Besides the classification of reference groups, we can also discern three forms of reference group influence. In the first place, normative influence occurs when people alter their beliefs or behaviors to meet the expectations of others. Usually, the reference group exerts pressure to conform to group norms, for example, in terms of dress. Normative influence can result in acceptance of group beliefs and behaviors, but it can also result in compliance with group norms without accepting all its beliefs and behaviors (Homans 1961). Second, value-expressive influence occurs when a need for psychological association with a

group causes acceptance of its norms, values, attitudes, and behaviors. In this case, there is no group pressure. The underlying motivation is an enhanced image in the eyes of others, or identification with people that one admires or respects (Blackwell et al. 2001). Third, informational influence occurs when people accept the opinions of others as evidence about reality. This is most likely to happen in situations in which people have difficulty assessing product or brand characteristics by own observation. As a result, recommendations or usage by others are perceived as thoughtful and valid (Burnkrant & Cousineau 1975; Calder & Burnkrant 1977).

Reference groups affect consumers in different ways and to different degrees depending on consumer and product characteristics. In general, reference group influence tends to be higher in cases where there is (1) a high desire for social acceptance, (2) little experience in the situation or with the decision, (3) public conspicuousness of purchase and use, and (4) complex products or luxury items. In contrast, reference group influence tends to be lower in cases where there is (1) a low desire for social acceptance, (2) much experience with the situation or the decision, (3) private use of product, and (4) simple products or necessities (Blackwell et al. 2001).

What do we know about the functioning of virtual communities as reference groups? First, we'd like to know why people adhere to them. In this respect, Bagozzi and Dholakia (2002) examine what drives people to become a virtual community member and act as an agent of the community in concert with other members. More formally stated; they investigate how so-called we-intentions determine virtual community participation. They find two mediated antecedents for we-intentions, namely positive anticipated emotions and social identity (i.e., self-categorization, affective commitment, and group-based self-esteem). Positive anticipated emotions are an individual-level motive, whereas social identity is a group-level motive (Bagozzi & Dholakia 2002). In a follow-up paper, Dholakia et al. (2004) introduce five specific, individual-level, value perceptions and model these as antecedents to various group-level variables, which in turn influence community participation. Furthermore, they discern between virtual communities that are small group-based; members usually interact with the same group of people (e.g., MUDs and chat rooms) versus virtual communities that are network-based; members usually interact with different individuals or groups of people (e.g., email lists, bulletin boards, and newsgroups). Now they find that the main reason for participation in small group-based communities is social benefits, whereas informational and instrumental value is the main reason for participation in network-based communities. In both types of community, social identity and group norms are positively related to we-intentions that underlie participation behavior. In short, people have specific reasons to

participate in specific types of communities. Besides, they are likely to increase their participation if they identify with the group and internalize its norms.

Neither paper investigates the influence of community participation on consumer decision-making. Thus, taking into account the existing knowledge about traditional reference group influence, what can we say about the kind of influence exerted by virtual communities? Traditional reference group influence is based on the perceived norms and overt behavior of the reference group. Normative and value-expressive reference group influence operate through a reward and punishment system that is contingent upon the visibility of one's own behavior and the expected reactions of the reference group upon the behavior that is displayed (e.g., Park & Lessig 1977; Rae Bachmann et al. 1992). In the context of virtual communities, influence among group members takes place via online interaction. Offline behavior is not visible, unless interaction also takes place in real life. Therefore, in an online environment reference group influence is based on communicated norms and self-reported behavior. One's actual behavior outside of the virtual community is not necessarily visible for the other community members; thus, a reward and punishment system for displayed behavior has little value. Moreover, virtual communities tend to be characterized by a low entry and exit barriers. If a member does not agree with the group norms, the easiest option is to leave the virtual community and join another that is more similar in beliefs and behavior. In traditional reference groups, this option to leave and withdraw from group pressure to conform to norms is less available. Hence, we expect that normative and value-expressive reference group influence on offline behavior are less likely to occur with respect to virtual communities.

Note that our proposition especially refers to virtual reference group influence on *offline behavior*. With respect to reference group influence on *online behavior*, the concepts of normative and value-expressive influence are relevant. Research efforts have indicated that group norms with respect to online behavior emerge whenever there is prolonged, computer-mediated interaction and communication between people (e.g., McCormick & McCormick 1992; Postmes, Spears & Lea 1999). This conformity shows itself, for example, in a specific email writing style or length of messages. Moreover, online communities ensure that participants conform to group norms by reproaching the offender. McLaughlin, Osborne and Smith (1995) conducted a study investigating the various reproaching techniques used within Usenet groups. They found that reproaches ranged from a mild correction to truly vicious email attacks on the offender. Community managers build on this tendency to enforce group norms by facilitating community members with rules and tools that allow them to establish and maintain an amiable ambiance in the community. Many communities have a code of conduct that specifies community standards with regard to behavior, language, content, identity, commercial use, and et cetera. Oftentimes, community members point out the code

of conduct to each other, so that manager interference to enforce the rules is not necessary (Wallace 1999; Kim 2000).

In contrast to normative and value-expressive reference group influence, the concept of informational reference group influence is very appropriate to explain the interaction between online and offline interpersonal effects among virtual community members. Informational reference group influence is a process of internalization of the perceived norms and opinions of the reference group as evidence about reality. In case of face-to-face interaction, this internalization process is reinforced by the observation of the reference group's behavior. Virtual community members are generally not exposed to each other's offline behavior, but sharing information about opinions and experiences is usually what it is all about; many members actively seek information and advice from other members. The most important source characteristic that determines the internalization process is credibility, i.e., the source's expertise and trustworthiness. Internalization is likely to occur when a receiver perceives the sender to be knowledgeable about a subject and free of personal gain as a motive to communicate about a product of service (Percy & Rossiter 1980).

Bickart and Schindler (2001) have investigated the effect of informational reference group influence on consumer behavior in the context of online bulletin boards. Based on the existing literature they assume that online information produced by other consumers is perceived as more credible and relevant, and results in more empathy than marketer-generated information. Consequently, they hypothesize that bulletin board content results in greater interest in and purchase intentions for the product categories that are discussed. They test this in an experimental setting with 61 undergraduate students that are asked to look at either corporate web pages or online consumer discussions related to specific product categories. Their study confirms that the participants who are exposed to the online consumer discussions report more product interest than the participants who are exposed to the corporate web pages. However, behavioral effects on purchase likelihood and the amount of money that the participants expect to spend in the various product categories are inconclusive.

Although Bickart and Schindler's study indicates that consumer-generated online information results in stronger product interest than marketer-generated online information, it does not directly examine the underlying reason. Okleshen and Grossbart's (1998) study on Usenet groups, however, sheds some light on this issue. By means of an online survey among participants in 37 Usenet groups, they examine the antecedents and consequences of perceived membership in virtual communities. With respect to the consequences, they hypothesize that if consumers view themselves as members, Usenet groups will be more apt to influence their behaviors. Moreover, they hypothesize that if consumers view the online information as valuable, accurate, and reliable, it is more apt to change their behaviors. The

results show that the strength of a consumers' perception of being a member is positively related to the degree to which he or she values the information in the discussions, which is positively related to the extent of change in their behavior. There is no direct relationship between membership perception and behavioral changes. This result is consistent with the idea that virtual communities act as informational reference groups rather than normative or value-expressive reference groups that exert social influence.

The existing knowledge about reference group influence in the physical world and the studies into reference group influence online raise many interesting questions about the functioning of virtual communities as reference groups. This dissertation starts with answering the most basic ones.

Study 1 examines the relative importance that is attached to SmulWeb as a source of information compared with other sources, such as family and friends, papers and magazines, and the broadcast media. By doing so, we gain insight in the value of the virtual community as a reference group compared with traditional reference groups, including those that are dominated by marketer-generated information. This allows us to compare Bickart and Schindler's laboratory findings with those obtained in a real life setting.

Furthermore, we systematically examine the determinants and the effects of virtual community influence on consumer decision-making. Hereby, we take the distinction between the various forms of reference group influence into account, and we examine to what extent susceptibility to normative versus informational reference group influence is related to community influence on consumer decision-making.

Okleshen and Grossbart focus on Usenet group influence on behavior. Instead, we focus on the differential effects of community influence on various phases of the consumer decision process for a more detailed understanding of the functioning of the virtual community as a reference group.

Finally, we investigate whether community influence differs across decision processes to see whether the conditions under which traditional reference group influence is likely to increase or decrease also apply to virtual communities.

Dholakia et al. (2004) find that people have different reasons for participating in small group-based versus network-based communities. SmulWeb is based on an integrated Internet-platform that combines functionalities of both types of communities. This means that members may combine a social benefit motivation with an informational and instrumental value motivation to participate. It is interesting to examine the subsequent effect on the level of community influence on consumer decision-making. In Study 2, we distinguish members on the basis of how they make use of the community. Thus, we can

discern to what extent they make use of the small group-based versus the network-based functionalities, and compare levels of community influence between member types that use these functionalities to a different extent.

3.3 WORD-OF-MOUTH COMMUNICATION

In order to better understand the actual mechanisms of interpersonal effects in an online environment we need to focus on the way information flows from one member to another within virtual communities. Here we introduce the second stream of research that we use to build our theoretical framework: word-of-mouth communication.

Word-of-mouth is the informal transmission of ideas, comments, opinions, and information between two or more individuals, neither one of which is a marketer (Blackwell et al. 2001). Despite its name, word-of-mouth does not necessarily have to occur through oral communication. Body language, facial expressions, texts, audio-visual or interactive material may also contain word-of-mouth. Of course, not all communication between people is word-of-mouth communication. Word-of-mouth occurs when people talk about the characteristics of, or their experiences with a product or service. Usually, the communication directly or indirectly includes a recommendation. This recommendation can be positive or negative. Research has shown that positive word-of-mouth is more likely to occur than negative word-of-mouth (e.g., Rossiter & Percy 1997; Chevalier & Mayzlin 2003). However, the effect of negative word-of-mouth on consumer decision-making is stronger than the effect of positive word-of-mouth (e.g., Holmes & Lett 1977; Mizerski 1982; Herr et al. 1991). The reason for this is that the abundance of positive marketer-generated information alerts consumers to anything that provides a different perspective (Blackwell et al. 2001).

Receivers and senders in the word-of-mouth process both gain from the exchange. Word-of-mouth gives receivers more information about choice options and behaviors, which may serve as valuable (and, compared with marketer-dominated communication, more reliable) input in their decision process. It may enable receivers to make more effective and more efficient purchase decisions, thereby decreasing the risk of a new buying experience, decreasing cognitive dissonance (i.e., doubts after a purchase), and increasing the confidence of product choice (Blackwell et al. 2001). Senders, on the other hand, may also decrease cognitive dissonance and increase confidence in their product choice and buying behavior by persuading others to do the same. Moreover, advising others may induce feelings of power and prestige and increase their status and cohesion within a group. Senders may gain benefits from engaging in word-of-mouth simply because they are very involved in a consumption

activity or product category and like to talk about it. Finally, senders may enjoy reciprocity of exchange and receive valuable recommendations in turn (Blackwell et al. 2001).

The sender in the word-of-mouth process is often referred to as the influential or opinion leader. Key characteristic of opinion leaders is their involvement in a particular consumption activity or product category. Opinion leaders like to talk about their topic of interest: their tendency to initiate conversations is proportional to the extent of their involvement. Usually, opinion leaders are interested in increasing their expertise by gathering information about the topic in mass media and other sources. Furthermore, opinion leaders tend to be innovative and positive towards new products in general. Also, they are found to be more socially active, fashion conscious, and independent (e.g., Rogers 1983; Venkatraman 1990; Yale & Gilly 1995). People may be opinion leaders for one particular product category, but not for others. However, some consumers can be considered as opinion leaders across a wide variety of product categories and consumption activities. These consumers are labeled market mavens (Feick & Price 1987).

Word-of-mouth recommendations can have a more decisive role in the consumer decision process than advertising or other marketer-dominated sources (e.g., Price & Feick 1984; Swartz & Stephens 1984; Herr et al. 1991). This is primarily due to the greater perceived credibility of the sender, who is considered to have no ulterior or commercially motivated reason to share information (Arndt 1967; McGuire 1985). Typically, the effect of word-of-mouth communication is largest when there is a strong tie and a high degree of homophily between the sender and the receiver (Johnson Brown & Reingen 1987). Tie strength is defined as the combination of the amount of time devoted to the relationship, and the level of emotional intensity, intimacy, and reciprocity reached (Granovetter 1973). Homophily refers to a high level of similarity between the sender and the receiver in terms of demographics, lifestyle, and ideology. Furthermore, word-of-mouth tends to have more impact when the receiver initiates the communication rather than the sender (Gatignon & Robertson 1985). Finally, the influence of word-of-mouth recommendations is strongest with respect to high-risk products, new products, and intangible products that are difficult to compare (Zeithaml 1981; Rogers 1983; Wilkie 1986).

Virtual communities can be considered word-of-mouth *networks*, i.e., consisting of multiple dyads. Multiple dyads occur with one source and several receivers, as well as with several sources and one receiver (Bristor 1990). The impact of word-of-mouth communication within virtual communities is dependent on both the structural and the interactional characteristics of the network (Johnson Brown & Reingen 1987). The structural characteristics include factors such as the size of the network, number of connections between one person and all others, and the number of actual relationships relative to the

potential number, whereas the interactional characteristics include tie strength and degree of homophily among members of the network (Bristor 1990). The potential impact of virtual communities is large; recommendations can be made at virtually no costs, and they can spread quickly within and outside the virtual community network. Moreover, virtual community members share an interest, which produces affinity and creates a bond. These social network qualities coupled with the perceived credibility of consumer evaluations, make the virtual community a powerful platform for exploiting consumer-to-consumer recommendations, for example, by means of viral marketing campaigns, i.e., using online consumer-to-consumer referrals as a means of multiplying the popularity of a brand, product, or company (e.g., Brodin 2000; Beckmann 2001).

Hennig-Thurau et al. (2004) have investigated what motivates consumers to make word-of-mouth recommendations via online consumer-opinion platforms. They find evidence for eight different motivations that largely correspond to motivations found for engaging in word-of-mouth communication in the traditional, face-to-face setting: (1) venting negative feelings, (2) concern for other consumers, (3) self-enhancement, (4) advice seeking, (5) social benefits, (6) economic incentives, (7) platform assistance, and (8) helping the company. Hennig-Thurau et al., furthermore, examine to what extent the frequency of visits, as well as the number of comments written, are a function of these eight motivations. In both cases, it is social benefits that motivate consumers most strongly to visit the platform and articulate themselves. Finally, the authors develop a motivation-based segmentation of electronic word-of-mouth senders that distinguishes self-interested helpers who are driven by economic incentives, consumer advocates who act out of concern for other consumers, true altruists who are motivated to help both other consumers as well as companies, and multiple-motive consumers.

Other researchers have focused on the effects of online word-of-mouth communication. Chatterjee (2001) reports the results of an experiment that examines the effect of negative online reviews. This study shows that existing theories about interpersonal influence in the traditional setting also apply to the online context; consumers are more likely to search for and accept (negative) online word-of-mouth communication in a situation in which they lack information and experience, as well as in a situation in which risk is higher (cf., Rogers 1983; Richins 1983; Herr et al. 1991). Chevalier and Mayzlin (2003), as well as Dellarocas et al. (2004), address the value of online word-of-mouth recommendations in terms of their financial impact and their revenue forecasting potential. Chevalier and Mayzlin show that the number of online consumer reviews about a book is related to book sales. Besides, they find that negative reviews have a stronger effect than positive reviews; this effect has been shown before in the offline context. Dellarocas et al. show that online consumer reviews about movies are representative of the movie-going audience at large, and that the online consumer

reviews better forecasters of movie revenues than professional critic reviews. Together, their findings support the viewpoint that online forums are emerging as alternative and influential sources of information.

The existing theory about word-of-mouth communication frames our research into virtual communities in terms of senders, receivers, opinion leaders, and opinion seekers. In contrast to the reference group literature that focuses more on the forms and the effects of interpersonal influence, word-of-mouth research addresses the process and the participants.

In particular, we are interested in gaining insight in how members participate in the word-of-mouth network presented by the virtual community. Who are the senders and who are the receivers? Hennig-Thurau et al. have investigated why consumers give online word-of-mouth recommendations. We want to know who contributes to the community's word-of-mouth network, how often, and in what way. In Study 2, we develop a member typology that sheds light on this issue.

Furthermore, with respect to Study 1 that examines the determinants and effects of community influence on the consumer decision process, we investigate whether tie strength between individual members and the community is associated with online word-of-mouth impact, as it is with the level of word-of-mouth influence in the offline context.

Dellarocas et al. find that online movie reviews are representative for the movie-going audience at large. Are contributions to virtual communities also representative for a larger population? We address this issue in Study 3 in which we examine the discourse in online forum discussions.

3.4 COMPUTER-MEDIATED COMMUNICATION & INTERACTION

Besides the literatures on reference group influence and word-of-mouth communication, this dissertation also draws on research into computer-mediated communication and interaction. In this section, we discuss in what respects communication and interaction via computer-mediation is different from communication and interaction in the physical world, and we point out how these differences affect processes of interpersonal influence.

The space that we enter when we make use of the Internet is often conceptualized as a parallel world to our real life environment (e.g., Rheingold 1993; Bolter 1997; Strate, Jacobsen & Gibson 1997; Jones 1999). This space, cyberspace, is in many ways distinctly different from the physical world. Two characteristics stand out. First of all, communication and interaction take place through a technological interface, i.e., a computer, mobile phone, or an interactive television with Internet access. This means that the primary relationship is

not between the sender and the receiver of information, but rather with the technology-mediated environment (Hoffman & Novak 1996). Therefore, relationships are not only determined by the interactivity between people, but also by the interactivity between people and machines. This last form of interactivity is for a large part governed by the amount of experience someone has dealing with these machines. Someone who frequents the Internet on a daily basis, for example in a professional context, is much more comfortable with navigating the Internet than someone who only surfs the Net occasionally. Screenagers who grow up with the medium will use it differently than elderly people. Consequently, Internet experience and computer literacy (also mobile phone literacy and interactive television literacy) influence someone's online behavior.

Furthermore, the fact that the primary relationship is with a machine and not with another person has major implications for what people perceive the medium can do for them. In media theory the concept of attitude towards the medium is developed (e.g., Short, Williams & Christie 1976; Fulk, Schmitz & Steinfeld 1990; Fulk, Schmitz & Ryu 1995). The concept is used to explain that someone's opinion about the utility of a medium determines the way that person makes use of the medium. For example, if you see the telephone only as a medium to communicate short messages then you will never use it for lengthy conversations with friends aimed at socializing. The same holds true for the Internet. People who have a skeptical attitude towards the possibilities to socialize over the Internet will show very different online behavior from people who have no problem making friends online (e.g., Markus 1994; Walther 1994; Utz 2000). Because tie strength is an important predictor for interpersonal influence in the physical environment, virtual community members who lack social relationships with other members are likely to be less influenced by their community membership compared with members who do develop these social relationships.

The second defining characteristic of cyberspace is its textuality. Communication and interaction online is to a large extent based on the written word, stripping away information about tone of voice, tempo, stress, facial expression, and gestures. Moreover, all information can be hypertextually linked to other layers of information, thus creating non-linear texts that require active composition by Internet users themselves. Many researchers have addressed these differences between computer-mediated and face-to-face communication and looked into the consequences for online behavior and relationship building. Although the Internet is characterized by fast technological developments, causing that yesterday's theories are caught up with today's reality, it is nevertheless important to discuss these theories, because they have shaped academic thinking about and research into cyberspace.

The oldest theoretical framework to analyze computer-mediated communication is the social presence model (e.g., Rice & Case 1983; Hiltz, Johnson & Turoff 1986; DeSanctis &

Gallupe 1987). It claims that it is more difficult to build relationships via computer-mediated than face-to-face-communication, because the lack of non-verbal information leaves the communication cold and impersonal rather than warm and sociable. According to this model social presence is low in cyberspace. Another influential theory is the reduced cues theory that states that the lack of social and contextual cues undermines the perception of leadership, status, and power (e.g., Kiesler et al. 1984; Sproull & Kiesler 1986; McGuire, Kiesler & Siegel 1987). This leads to a reduced impact of social norms and therefore to de-regulated, anti-normative behavior. People become depersonalized because the attention focuses on the written text, not the social context. Other perceived difficulties are the loss of identity, reduced self-regulation and self-awareness. Social norms and constraints are less present. The resulting disinhibited behavior causes a hostile impersonal atmosphere and impedes the development of genuine relationships.

Based on the social presence model and the reduced cues theory, researchers have tried to explain both perceived negative and positive effects on human interaction and interpersonal influence online. On the negative side, human behavior in cyberspace has been characterized as being less committed and involved than in the physical environment. Because of the low social presence and the lack of cues, people do not feel obliged to give their best (e.g., Thompsen 1996). Information on the Internet is out there for the taking; you do not need to show reciprocity in your behavior. In traditional community settings this is much harder. One cannot so easily back out from group duties. Receiving a favor compels you to give one. And if you give false information, then the group might confront you with it. In online word-of-mouth networks, it may always be the same members that disseminate information and there are fewer possibilities for disciplining senders of false information.

On the positive side of perceived effects of the reduced cues in online environments, it has been put forward that a status equalization phenomenon may occur within virtual communities (e.g., Reid 1999; Wallace 1999). Within groups some members have more influence than others. Power and status relationships in the real world are oftentimes influenced by cues about age, gender, profession, income, education, and knowledge (Hare 1962). In a computer-mediated environment, these cues are less apparent. Unlike real life, face-to-face groups, in which status often determines who contributes most and has the most influence in a discussion, computer-mediated group communication tends to allow more participation and influence by lower status members (Wallace 1999). Roberts, Smith and Pollock (1997) studied participants in MUDs and chat rooms and they indeed found that individuals who self-identified as shy reported that they were less inhibited and less reserved in the online environment. This might result in online word-of-mouth networks that bring forth very different influentials than in the real world.

The low social presence and reduced cues on the Internet increase perceived anonymity. When people believe their actions cannot be attributed directly to them personally, they tend to become less inhibited by social conventions and restraints. This has negative effects, such as increased aggressive and hostile communication also known as flaming, i.e., the tendency to express oneself sharper online than in ordinary communication settings (Thompsen 1996). However, anonymity also has positive effects on online behavior, particularly when people are offered the opportunity to discuss difficult personal issues under conditions in which they feel safer. Online support communities are flourishing, partly because many of the participants feel freer to discuss concerns in the relatively anonymous Internet environment than they might be willing to do in a face-to-face support group (e.g., Galimberti, Ignazi, Vercesi & Riva 2001; Warisse Turner et al. 2001).

It is important to note that the low social presence and reduced cues theory have been developed in the mid-80s, mostly based on laboratory experiments. Meanwhile, many researchers have shown by means of field studies that computer-mediated environments can be very rich in socio-emotional content and that many users develop intimate and meaningful social relationships with one another (e.g., Rice & Love 1987; Parks & Floyd 1996; Parks & Roberts 1998). Walther has postulated that it is merely a matter of time to overcome the barriers of low social presence and reduced cues. According to him the impression development process takes longer via computer-mediated communication compared with face-to-face settings, but if there is sufficient time, the differences diminish (Walther 1992).

Furthermore, people have found ways to circumvent the cold character of the Internet by using emoticons (e.g., smileys) and other paralinguistic codes (e.g., capital letters to express excitement or anger) to communicate emotions and feelings. They have learnt to decode and interpret social information in other forms than face-to-face cues, such as the content of the posts that one writes. Virtual community members judge each other by the words they choose, the rigor of their arguments, and the eloquence of their messages (Walther 1996; Wallace 1999). Again, this allows for the rise of another type of influential than found in the physical world. It is not people's charismatic appearance or status that determines whether their opinions are taken into account, but the convincing and entertaining nature of their written contributions.

Based on these studies into the peculiarities of cyberspace and the effects on interpersonal influence, we are able to come up with another set of interesting research issues. First of all, we include Internet proficiency, membership length, and social involvement in our framework that studies the determinants and effects of community influence on the consumer decision process (Study 1). As our discussion has made clear, we may expect that each of

these factors increase the likelihood of community influence, because with experience, time, and the development of social relationships, the alienating, impersonal character of computer-mediated interaction diminishes. This will not only increase members' ability to locate valuable information within the community and assess its usefulness, but they will also be more willing to take it into account, because the information no longer comes from complete strangers but from virtual friends.

Furthermore, given the fact that interpersonal influence through virtual communities is primarily exerted by means of written text, it is interesting to examine what tactics the community members use to influence each other. Because cues about age, profession, social status, et cetera, are not directly apparent, virtual community members have to use other means if they want to convince others of their knowledge and expertise. In Study 3, we analyze ongoing forum discussions to gain insight in this issue.

This chapter has given a broad overview of theories and existing knowledge about reference group influence, word-of-mouth recommendation, as well as computer-mediated communication and interaction. We have used these to formulate interesting research issues with respect to interpersonal influence through virtual communities that we will address in the remainder of this dissertation. However, before we go into the frameworks, analyses, and results of the three studies in Chapters 5, 6 and 7, we describe the research setting and survey methodology in Chapter 4.

Chapter 4

Methodology

4.1 INTRODUCTION

As we have explicated in Chapter 1, the objective of this dissertation is to investigate various aspects of virtual community participation and its effects on the consumer decision process. This is done by means of three exploratory studies that each addresses a different aspect of community participation and influence. Data collection took place in two rounds using two different methods, i.e., an online survey and a netnography. The choice for online research methods follows logically from the research area, i.e., virtual communities. The prospective research population is comprised of participants in virtual communities in general. Within the context of this dissertation, however, focus is limited to one virtual community that served as a research site for our three empirical studies.

In this chapter, we describe the research site and the survey method that was used to gather data to examine the determinants and effects of community influence on the consumer decision process (Study 1), and to develop a virtual community member typology based on participation patterns (Study 2). Chapters 5 and 6, respectively, present the accompanying theory, analyses, and results. Study 3 that analyzes ongoing forum discussions is based on netnographic research. A netnography is a written account of online cyberculture, informed by the methods of cultural anthropology (Sherry & Kozinets 2000; Kozinets 2002a). Details about this methodology, as well as the accompanying theory, analyses, and results, are addressed in Chapter 7 itself.

This chapter is organized as follows. Section 4.2 introduces the community under study. The questionnaire development is detailed in Section 4.3. Section 4.4 describes the process of data collection. In Section 4.5, we highlight several sample characteristics and make comparisons of the sample to the community population and the Dutch Internet population. Issues of validity, reliability, and generalizability will be addressed throughout the entire chapter.

Figure 4.1
Central homepage of SmulWeb

4.2 SMULWEB

The most important criteria for selecting a virtual community that could serve as the basis for answering the research issues addressed in this dissertation were: (1) an abundance of member-generated contributions, (2) lively participation and high traffic, (3) a large number of members, and (4) enough variation among them in terms of community participation and consumer characteristics. Preferably, the community had to be in existence for some time so that start-up problems would have faded and some level of sustainability could be expected. Besides, we preferred a Dutch community, because that would simplify communication and making arrangements with the community administrators. With these criteria in mind, we searched for suitable communities using search engines, trade journals and magazines, as well as a snowball inquiry amongst colleagues, friends, and their acquaintances. Many indicated options were scrutinized and then dismissed, because one or more criteria were not met. A lot of (Dutch) virtual communities are enthusiastically initiated, but never come truly

off the ground, thus lacking a sufficient number of member-generated contributions and participants (cf., Brown 1999). After close investigation, we chose SmulWeb (http://www.SmulWeb.nl) as a case study, because of its large and active member database. Also, its topic of interest appealed to us, which we considered an extra benefit. See Figure 4.1 for an impression of the community's homepage.

SmulWeb is a Dutch virtual community about culinary matters. Its topics of interest are recipes, restaurants, food products, kitchen utensils, dieting, wine, and other culinary matters. The community was developed as a showcase by an independent company, OLM Community Marketing, that developed virtual community concepts for businesses and institutions. However, the community turned into such a success that the administrators decided to exploit it as a separate business unit. The community went online in September 1998. To visit the community's web pages beyond the central homepage, people need to register. Registration requires only a user name, pass word, and email address; thus, entry barriers are low. Within one year the community had approximately 40,000 registered members. By September 2000, only two years after its startup, the community consisted of more than 100,000 members (Oostveen 2001). The member database growed rapidly. At the time of the survey data collection in March 2002, there were already more than 170,000 registered members. After rapid growth, expansion of the community stabilized. New members still join every day, but the administrators have also started clearing the member database of inactive accounts. Currently, the community consists of circa 160,000 members (August 2004).

Table 4.1
Functionalities offered by SmulWeb

Central homepage containing links to all functionalities; recipe of the day; advertorials; special offers; contests/polls; 10 latest recips; list of latest contributions; list of most popular contributions; member birthday index; features with direct links to member pages, recipes, reviews, and articles; links to electronic newsletters	
Personal member homepages	Store evaluations
Subcommunities	Product evaluations
Recipe database	Announcements of culinary events
Drinks database	Requests
Restaurant review database	Discussion forums (6)
Article database	Chat room

Table 4.1 lists the functionalities offered by SmulWeb. The lure of this community is its organizational structure that allows members complete responsibility for the community's content. The administrators take care of the infrastructure for the functionalities; the members provide the content. They generate content in the form of recipes, restaurant reviews, product reviews, shopping tips, and articles. Members may react to each other's contributions by filling in a standard evaluation form or submitting a comment displayed at the end of each contribution. Members may start sub-communities around specific (culinary) subjects. They may participate in six topical forums (addressing culinary issues, wine, dieting, questions and answers, computer-technical issues, and off-topic subjects, respectively). They may also contribute to the community's chat room in which three daily chat sessions are organized. Finally, there is a section for making requests, and a section for informing the community about events. Of course, all sections have a specific search function that facilitates search actions.

The administrators execute no censorship or editing, apart from cases in which members make indecent or disruptive contributions. Thus, members have a large sense of ownership and many show reciprocity in their participation. The result is a huge database of member contributions. Five years after the community's startup, in September 2003, the community counted more than 200,000 recipes, more than 11,600 articles, more than 11,500 restaurant reviews, and more than 200 sub-communities. These numbers continue to grow. Altogether, it is the largest online culinary knowledge reservoir in the Netherlands.

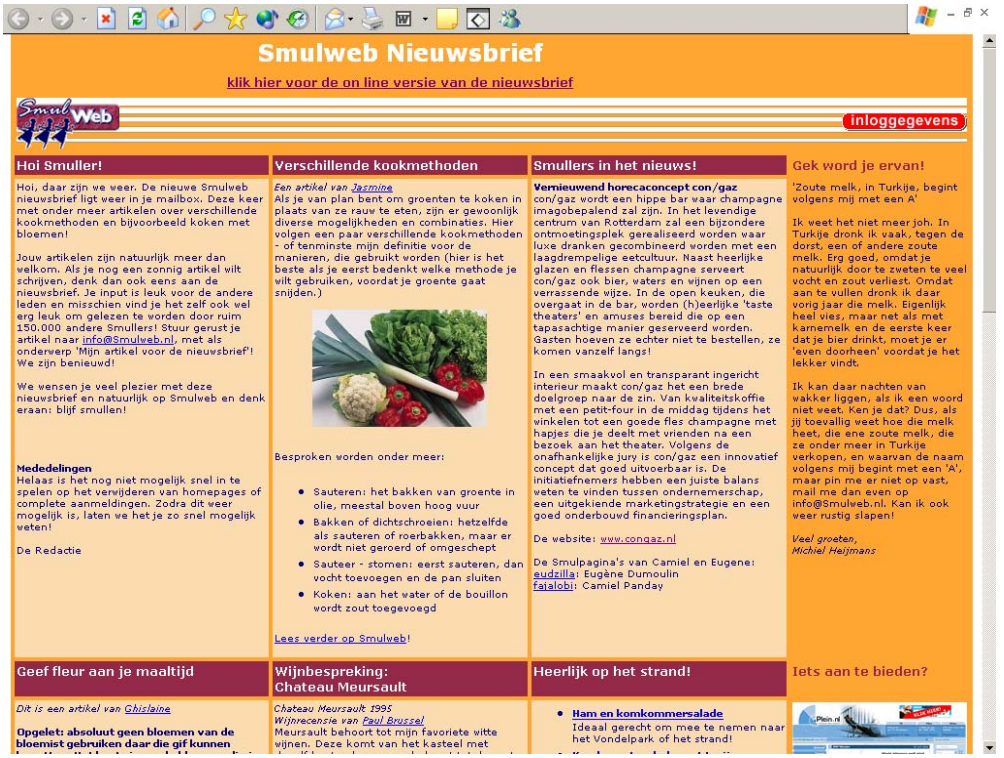
Upon joining, every member is automatically supplied with a personal homepage (see Figure 4.2) that fulfills several functions. In the first place, the home page can be used to reveal personal information to other community members. Although this function is optional, many members do give background information, for example, about their age, profession, marital status, place of residence, hobbies, the level of their culinary skills, and their passion for cooking. Often times, written text is accompanied by photos, illustrations, and music to give extra expression to someone's (constructed) identity (cf. Jensen Schau & Gilly 2003). In the second place, the homepage serves as a platform to collect personally relevant information from the community. Members can bookmark recipes, articles, and reviews contributed by other members, and link them to their page so that they don't need to search the database every time they look for a specific contribution. The homepage also lists all personal contributions. Thus, it can be managed as a private online cookbook and culinary information source. Finally, each homepage comes with a guest book that can be used to send and receive messages within the community. This function stimulates social interaction among the members, because the guest books are used for congratulations of all sorts, and personal messages and inquiries about how one is doing.

Figure 4.2
Example of a SmulWeb member homepage

Although the administrators do not provide content, they give direction to the development of the community by means of editing the central homepage and sending out a bi-weekly electronic newsletter (see Figure 4.3). Over the years, the structure and specific sections have changed, but the function of both homepage and newsletter has stayed the same, i.e., stimulating community participation. This is done by highlighting remarkable member contributions; interesting articles, reviews, and forum discussions are put in the spotlight. Also, members may nominate each other's personal homepages for a special recommendation on the community's central homepage and in the newsletter. Consequently, active contributors are honored for their input and others are stimulated to become active themselves. The central homepage and newsletter also aid members in their search for information within the community. Seasonal culinary information, the recipe of the day, and a function to search for recipes with ingredients that are left in your fridge, facilitate members who visit the community to find a recipe. Links to the latest recipes, reviews, tips, and articles facilitate longtime members who search for new contributions. There is also a

list of links to the most popular recipes, reviews, tips, and articles. Furthermore, one can see which members have their birthdays, and who has joined the community. Finally, homepage and newsletter are used to make announcements, to organize polls, and to publish advertorials and advertisements.

Figure 4.3
Electronic newsletter



This brings us to the issue of revenue and profits. How does this community generate money? The business plan has several pillars: (1) using the member database for direct marketing purposes in behalf of third parties, i.e., sending personalized mails to members who have indicated that they are interested in receiving information about a certain topic. Thus, a wine dealer may send information about a special offer to those members who have agreed to receive mails about wine; (2) using the community as a test market. A food producer may, for example, distribute a new product and monitor member evaluations on a special forum; (3) renting community space in the form of a homepage to food producers, wine dealers, shop owners, culinary book sellers, and the like. They can use the homepage as

a platform for interaction with interested consumers; (4) placing advertorials and advertisements on the community's homepage and in the newsletter. To prevent member wariness as a result of too many commercial banners and slogans, commercial advertisement space is limited and mainly restricted to culinary topics.

Despite the huge success of the community in terms of member participation and contribution, it has appeared quite difficult to generate sufficient revenue. Potential clients did not recognize the possibilities or preferred not to outsource direct and test marketing. Instead of renting community space, companies and producers created their own, independent web presence. Advertising revenues were restricted by policy. Altogether, the market has not been great for Internet-related companies after the Internet bubble. Whatever the reason, SmulWeb has struggled to make a profit. In March 2004, the community was sold to a company that exploits portals (Internetpleinen B.V.). The new owners have set out to improve SmulWeb in terms of capacity and organizational structure. The members remain the main actors, but the administrators intend to be more active in their role as director. Funding by means of advertorials and advertisements will gain in importance.

4.3 QUESTIONNAIRE DEVELOPMENT

SmulWeb served as the research site for the three studies in this dissertation. In this section, we focus on the online survey that we developed to collect data for Study 1 and Study 2. The goal of the first study was to generate systematic insights into the determinants and effects of community influence on the consumer decision process. The goal of the second study was to classify community members on the basis of their participation behavior in the community. The research goals together with the theoretical background discussed in Chapter 3 provided us with four main categories for which data had to be collected, namely: (1) community influence on the consumer decision process, (2) community membership characteristics, (3) community interaction characteristics, and (4) general consumer characteristics.

With respect to community influence on the consumer decision process, we specified the data collection to capture community influence on different phases of the decision process, as well as community influence on different decision processes. In the context of SmulWeb that serves in the first place as a huge recipe database, we decided to take community influence on four phases of the cooking decision process as the main dependent variables of Study 1, i.e. community influence on need recognition, search for information, pre-purchase evaluation, and post-purchase evaluation. See Chapter 5 for our reasons for focusing on these phases of consumer decision-making. Furthermore, we collected data about community influence on the restaurant visiting and kitchen utensils buying decision processes to

examine whether the extent of community influence differs across decision processes. For each of these decision processes, we also included a question asking about the value attached to the community as a source of information compared with other sources, including traditional reference groups, such as family and friends. Note that, because we collected data by means of a survey, we could only capture *perceived* community influence.

With respect to community membership characteristics and community interaction characteristics, we included in our survey many questions capturing why people became a community member, how long they have been member, how often and for how long they visit the community, on which days of the week and at what time during the day they visit the community, what kind of Internet costs are related to their community visits, what kind of activities they engage in when they visit the community, to what extent they have developed a social tie to the community, how many members they are familiar with, and to what extent they are dedicated to the community's topic of interest. Together, these questions provide us with a comprehensive data set about how members make use of the community, allowing us to systematically examine which factors are related to community influence on consumer decision-making, and allowing us to develop a member typology based on participation patterns.

Finally, with respect to general consumer characteristics, we not only collected data about demographics and socioeconomics, but also about members' culinary profile, Internet profile, and their orientation towards others, because the existing theories about reference group influence, word-of-mouth communication, and computer-mediated communication and interaction suggest that these variables could be related to how members make use of and relate to SmulWeb and are subsequently influenced by it. Questions about someone's culinary profile were included to capture the extent to which members are culinary opinion leaders and seekers, and to gain an idea of their relative culinary expertise compared with their real life enviroment and compared with the other community members. Questions about members' Internet profile were included to capture members' Internet proficiency; how long have they been using the Internet, for how many hours per week, for what kind of activities do they use the Internet, have they ever made online purchases, and how many other virtual communities have they joined besides SmulWeb. Questions about members' orientation towards others were included to capture the extent to which members may be susceptible to interpersonal influence.

The questionnaire was fine-tuned on the basis of an ongoing netnography that the author started from the moment she gained entry to the community in September 2000.[3] As part of this ongoing research, she reviewed forum discussions, chat sessions, recipes, restaurant and product reviews, article contributions, sub-communities, nominations, lists of favorites, members' personal web pages, guest book messages, et cetera. She also participated in an offline community gathering and performed in-depth interviews with several participants and the community's administrators. The netnography has delivered valuable input for developing the variables and items used in the survey.

Pretesting was performed in two sequential stages. First, a draft of the questionnaire was pretested in personally administered interviews with three marketing academics that evaluated domain representativeness, item specificity and clarity of construction. The second pretest involved administering an online version of the questionnaire to 10 members and two administrators of SmulWeb. They were requested to indicate any ambiguity or other difficulty they experienced in responding to the items, as well as offer any suggestions they deemed appropriate. After both tests, items that were identified as problematic were either revised or eliminated, and new items were developed. By the end of the second stage, the final questionnaire consisted of 20 multi-item constructs that were operationalized with five-point rating scales.[4] Other variables were measured by means of fixed-response alternative questions (24 variables) and open questions (five variables). At the end of the survey, respondents could fill in their username and email-address to be eligible for one of the incentives used to enhance participation. The survey concluded with the possibility to make suggestions or remarks.

The complete, original survey (in Dutch) is reported Appendix A. The measurements and measurement purification procedure are discussed in Chapter 5, after introduction of the research framework and hypotheses of Study 1. In the next section, we describe the data collection procedure. Sample characteristics are discussed in Section 4.5.

[3] To give an accurate description of the followed procedure, we abandon the plural denominator for the author(s) that is commonly used in research papers and, instead, use 'she' to specifically indicate the main author.

[4] We have chosen for five categories in all Likert answer scales. This is the advised minimal number of categories (Cox 1980). The choice of five-point scales is based on the fact that the questionnaire is very lengthy. Besides, all Likert scale questions contain multiple items (sub-questions). Including more categories would require too much effort and might have led to respondents dropping out.

4.4 DATA COLLECTION

The survey population consisted of all 170,000 members of the SmulWeb-community that were registered in the database at the time of data collection in March 2002. The sample is a convenience sample. Recruitment was realized through an announcement on the community's central homepage containing a direct link to the online survey site. In the announcement, the purpose of the study was explained and confidentiality of responses was guaranteed. The announcement was placed on the central homepage during the entire period of data collection. Halfway the data collection period, the community's newsletter was spread through electronic mail among 170,000 members, containing a similar announcement with a direct link to the survey. The questionnaire was electronically designed by means of standard software that ensured an easy-to-access survey site and an easy-to-navigate survey interface (www.survissimo.org). Respondents could fill out the questionnaire online; their answers were directly saved in a data file on the supporting Web server. Respondents had a chance of winning one of seven small prices (four cookbooks and three dinner coupons) as an incentive for filling out the survey. To ensure that less frequently visiting members had a chance of being in the sample, the survey has been online for four weeks from March 6 to April 3, 2002, generating 1007 responses. Elimination of respondent entries because of missing data was not necessary, since respondents were prompted by the Web server to complete omitted items. Only questionnaires that were fully completed could be submitted.

There is no precise and reliable means of determining response rate, which is the primary problem with most Web-administered surveys (Yun & Trumbo 2000). In this case, a potential of 170,000 respondents could have been reached, while only 1007 members actually filled in the questionnaire. This gives a response rate of approximately 0.006 %, which makes it fairly impossible to generalize. However, at the time of data collection, the database had not yet been cleared of inactive accounts. It contained all people who subscribed as a member since its start. Thus, members who registered once and never visited the community again were listed as one of these 170,000 members. Also, members who forgot their user name after an initial visit and created a new one upon re-entering the community were registered as two separate members. Furthermore, there is no information about whether subscribers to the electronic newsletter actually opened and read the email; thus, whether they were exposed to the announcement. Instead of taking the 170,000 registered members and newsletters receivers as a base line, the best indication of the sampling frame size is the number of unique visitors during the period of data collection, i.e. 29,197 members. Because everybody has to enter the community through the central homepage, all these people are likely to be exposed to the survey announcement that was

placed in an eye-catching position (upper left corner of the central homepage, directly under the SmulWeb logo).

On the basis of this number, the survey has generated a response rate of 3.5%, which is relatively low compared with other studies using Web-administered questionnaires. For example, reported response rates to email surveys vary from 6% (Tse, Tse, Yin, Ting & Hong 1995; Ranchhod & Zhou 2001), 7% (Tse 1998), 30% (Weible & Wallace 1998), 53% (Mehta & Sivadas 1995; Bachman et al. 1996), 58% (Schaefer & Dillman 1998) to 75% (Kiesler & Sproull 1986). An experimental study by Deutskens et al. (2004) makes apparent that it is difficult to compare response rates between studies, because factors such as length of the questionnaire and type of incentives used have a significant impact on the amount of response. The generated response of the SmulWeb survey is in line with response rates of previous surveys conducted in the same virtual community, namely 7.2% (January 2000) and 5.5% (February 2000) (Sanèanin 2000). An important reason for the low response rate might be the length of the questionnaire, which consisted of 52, mostly multi-item, questions that took between 30-45 minutes to fill in. Compare in this respect Deutskens et al., who found a significant higher response rate for a short online survey (15-30 minutes) than for a long online survey (30-45 minutes) (Deutskens et al. 2004).

Table 4.2 lists the percentage of respondents per day. Initial response was high. In the course of the first week, it gradually lessened, and during the second week it stabilized around 20-30 respondents per day. After 10 days, the survey had generated 50% of the final number of respondents. On day 14, the newsletter with the survey announcement was sent out. This served as a reminder for those members who had already been exposed to the announcement on the community's central homepage during a visit. At the same time, the newsletter brought the survey announcement under the attention of members who had not visited the community during the previous two weeks, thus, who had not been exposed to the survey announcement yet. As expected, the daily percentage of respondents increased considerably at first, and then slowly lessened again. By the end of the fourth week of the data collection period, the survey generated only one or two respondents per day. After exactly four weeks (28 days), the survey site was closed. The average response time was 10.2 days, which is comparable to other online survey studies, e.g., 9.6 days in Kiesler & Sproull (1986), 9.2 days in Schaefer & Dillman (1998), and 8.1 days in Tse et al. (1996) (Ilieva, Baron & Healey 2002).

Table 4.2
Percentage of respondents per day[a]

Day	Percentage	Cumulative Percentage	Day	Percentage	Cumulative Percentage
1	11.8%	11.8%	15	8.2%	72.6%
2	8.6%	20.4%	16	6.4%	79.0%
3	6.5%	26.9%	17	7.8%	86.8%
4	4.3%	31.2%	18	3.1%	89.9%
5	3.8%	35.0%	19	3.4%	93.3%
6	2.2%	37.2%	20	2.1%	95.4%
7	3.7%	40.9%	21	1.7%	97.1%
8	3.8%	44.7%	22	0.5%	97.6%
9	2.8%	47.5%	23	0.9%	98.5%
10	2.5%	50.0%	24	0.4%	98.9%
11	2.1%	52.1%	25	0.5%	99.4%
12	2.7%	54.8%	26	0.3%	99.7%
13	2.6%	57.4%	27	0.2%	99.9%
14 [b]	7.0%	64.4%	28	0.1%	100.0%

[a] Based on the final number of 1007 respondents.
[b] On day 14 the electronic newsletter with the survey announcement is sent out.

Next to response rate, non-response bias is a critical issue that could cause profound problems with generalizability. Non-response bias occurs when actual respondents differ from those who refuse to participate. In the next section, we will therefore compare characteristics of our sample with characteristics of the community at large. Another critical issue concerns the over-sampling of most active and dedicated members. Because of the recruitment method, members who visit the community daily were likely to be exposed to the survey announcement from the start of the data collection period, thus they had a larger chance of being in the survey than less frequent visitors who might have seen the announcement only at the end of the data collection period during their monthly visit to the community. To test for significant differences between the quick respondents to the slow respondents, we used Armstrong and Overton's (1977) time-trend extrapolation and compared the results obtained from the first 251 respondents with those of the last 251 respondents with regard to demographics, socioeconomics, culinary profile, Internet proficiency, and the extent of perceived community influence on the cooking decision process.

We find no significant differences between the first and last quartiles in terms of age, gender, income, extent of culinary opinion leadership and culinary opinion seeking behavior,

and years of Internet usage. However, we do find that the first quartile scores significantly ($p < 0.01$) lower on education level compared with the last quartile. Furthermore, we find that the first quartile scores significantly higher on number of hours spent weekly online ($p < 0.05$), and on perceived community influence on the cooking decision process ($p < 0.01$). This last finding suggests that the community members that are most likely to take the community into account as a reference group were among the first to complete the questionnaire. Because the first and the last group of respondents do not differ on key background variables, we conclude that this has not corrupted the general characteristics of the sample. In the next section, we discuss the sample characteristics in detail. Examination of these sample characteristics has eased our minds about only eliciting responses from the hardcore members who strongly affiliate with the community. We find that a large group of members who occasionally visit the community to search for a recipe also have taken the trouble of filling in the questionnaire.

Of course, the online survey methodology has its limitations. Surveys raise many questions about how people choose their responses. With all the changes from traditional survey formats to the computer-mediated environment, the manner in which people could respond might change. Several studies have attempted to determine the validity of email surveys (comparable to Internet surveys) and traditional surveys by directly comparing the same survey using both postal and email delivery (e.g., Kiesler & Sproull 1986; Mehta & Sivadas 1995; Bachman et al. 1996). These studies found that the response rates for both methods of delivery were equivalent. The studies also reported that the mean and range on Likert type responses were similar for both survey types. The differences between the two delivery formats showed up in features like faster response times and less expense for Internet surveys. Moreover, Internet respondents seemed to be not as prone to social desirability and they gave more candid and extensive responses to open questions.

Considering the fact that our target population consists of virtual community members, we can assume that they are at least to some extent computer-literate and familiar with navigating the Internet. This contention is validated by our sample that can be characterized as a fairly sophisticated Internet user group (see Section 4.5). Furthermore, using standard survey software ensured an easy-to-access survey site and an easy-to-navigate survey interface. We think it therefore unlikely that less technological-savvy members were inhibited from participating. For the same reason, we think it unlikely that respondents answered questions differently than they would have done if they were surveyed in a traditional manner. We could even argue that the fact that respondents were solicited online through the virtual community caught them in the right mindset to answer questions about

their virtual community membership. This benefit would have been lost if the survey was conducted by paper and pencil.

4.5 SAMPLE CHARACTERISTICS

Table 4.3 contains information about the demographic, socioeconomic, and cooking profile of the sample of 1007 respondents. The sample is skewed towards women: 85% of the respondents are female. The entire community population also consists of a majority of women, i.e., 70% vs. 30% (SmulWeb statistics, April 2002), which is not a surprise considering SmulWeb's topic of interest. Nevertheless, women are over represented in our sample. This needs to be taken into account with respect to the generalizability of results. Around the time of data collection, for example, the Dutch Internet population consisted of 42% women that, on average, visit a smaller number of web pages and spend less time online per visit compared with men (Nielsen/Netratings 2003a). Although the men and women in the sample do not score significantly different ($p > 0.15$) with respect to the extent of community influence on their consumer decision processes, we cannot assume that gender differences in online behavior have no effect on the generalizability of this research.

Table 4.3
Demographic, socioeconomic & cooking profile of the respondents[a]

Gender	male	15%	**Monthly income**	< 1500 €	16 %
	female	85%		1500 < 2500 €	43%
				≥ 2500 €	41%
Age	< 20	4%	**Professional status**	fulltime job	38%
	20 < 30	26%		part-time job	32%
	30 < 40	30%		no job	20%
	40 < 50	25%		student	10%
	50 < 60	13%	**Household size**	1 person	11%
	≥ 60	2%		2 persons	39%
				3 persons	17%
				≥ 4 persons	33%
Education	lower	13%	**Cooking frequency**	≤ 1 x per week	4%
	intermediate	44%		2-3 x per week	13%
	higher	43%		4-5 x per week	29%
				6-7 x per week	53%

[a] Based on the total sample of 1007 respondents.

After all, the male participants in the sample could have an online behavior profile that is dissimilar to the general Internet profile of (Dutch) men. In general, men and women behave somewhat differently online (e.g., Horrigan 2000; Rainie & Packel 2001; Madden 2003). Thus, this study should be replicated in gender-balanced or male-skewed communities to confirm the generalizability of results.

The sample shows a spread distribution over the main age categories. The average age of the respondents is 38 years (median: 37 years). This approximates the average age level in the entire community, which is 36 years (Sanèanin 2000). Compared with the Dutch Internet population, SmulWeb attracts a relative large percentage of adult and senior members. The cohort under 20 years, for example, makes up around 20% of the Dutch Internet population (Nielsen//Netratings 2003b) whereas this age group is much smaller in the community and the sample. Both in the sample, as in the community, there is a considerable age difference between men and women. In the sample, the average age of men is 47 years, whereas the average age of women is 37 years. This difference is caused by the relative large percentage of retired men that participate in the community (Sanèanin 2000).

The sample's average level of education is high: 43% of the respondents have finished a school for higher education. In the entire community this number is even higher: 50% have a higher vocational education or university degree (Sanèanin 2000). In general, the Dutch Internet population is also skewed towards users with a higher education (CBS Statline 2002). Furthermore, 70% of the respondents have a fulltime or part-time job. Comparable statistics for the entire community are not available, however, this number almost equals the percentage of the Dutch population that had a job in 2000, namely 64% (CBS Statline 2000a). Based on analyses of the SmulWeb database and log file data of participation behavior, the administrators have concluded that there is a significant number of young, high-educated female members who frequent the community regularly at the end of their working day to get a dinner recipe (SmulWeb statistics, October 2001). The sample characteristics are in line with this observation.

Statistics about monthly income indicate that the sample is relatively well to do compared with the Dutch population; 41% of the respondents reside in a household that has a disposable yearly income of at least 30,000 euro. In 2000, the average yearly Dutch household income was 24,800 euro (CBS Statline 2000b). Overall, 89% of the respondents are part of a household that consists of two or more persons. In the entire community, this percentage is 88% (Sanèanin 2000). This is considerably higher than the 66% multiple-person-households in the general Dutch population. Presumably, single-person-households are less interested in the community's topic of interest; cooking is usually considered more fun when the dinner can be enjoyed in company (see Chapter 7). Not surprisingly, the majority of respondents cook frequently; 53% even cook daily.

Table 4.4
Internet profile of the respondents[a]

Years Internet usage	< 1 year	2%	**Online purchase**	no purchase	33%
	1 < 3 years	29%		≥ 1 purchase	67%
	3 < 5 years	48%			
	≥ 5 years	21%			
Hours weekly online	< 5 hours	21%	**Virtual community membership**	Limited to SW	62%
	5 < 10 hours	23%			
	10 < 15 hours	17%		SmulWeb + other VC(s)	38%
	≥ 15 hours	39%			
Internet access to SmulWeb	at home	86%	**Internet costs**	variable costs	27%
	at work / school	14%		fixed costs	60%
				no costs	13%

[a] Based on the total sample of 1007 respondents.

Based on Table 4.4, we can conclude that the sample represents a group of fairly sophisticated Internet users; 69% have over three years Internet experience, and 79% spend more than five hours online every week, i.e., taking usage for private, business and study purposes together. Besides, the majority (67%) of the respondents have made one or more online purchases. Comparable statistics for the general Dutch Internet population are that, in the year of data collection, the average time spent online weekly was six hours and that 44% had online buying experience (CBS Statline 2002). Despite the high level of Internet sophistication, a large percentage of respondents report that they are monogamous with respect to virtual community membership; 62% are, besides SmulWeb, not a member of any other community. Most respondents access SmulWeb by an Internet connection that is located at home. Non-response bias could have occurred if only members with free or flat rate access to the Internet would have filled out the lengthy questionnaire. Fortunately, this does not seem to be the case.

Finally, Table 4.5 contains details about the membership profile of respondents. At the time of data collection, the community had been online for three and a half years. Its fastest growth spurt occurred between March and September 2000, during which period the member database almost doubled (from ca. 56,000 to more than 100,000 members). About one in four, 23%, of the respondents in the sample became a member before this growth spurt. From September 2000 until March 2002, the month in which data were collected, the community increased with 70,000 members. About one in three, 36%, of the respondents became a member between March 2000 and March 2001, while 41% became a member

during the year preceding the survey. In 2002, the growth of the community slowed down. Although the sample contains a relative large percentage of newbies, it represents also enough old-timers and established members for a meaningful distinction in terms of membership length.

Table 4.5
SmulWeb membership profile of the respondents[a]

Membership length	< 1 year	41%	**Frequency of visits**	monthly	25%
	1 < 2 years	36%		weekly	44%
	≥ 2 years	23%		daily	31%
Membership motivation	culinary interest	44%	**Duration of visits**	< 30 minutes	54%
	collect recipes	42%		30 < 60 minutes	31%
	fun	10%		60 < 90 minutes	10%
	other reason	4%		≥ 90 minutes	5%

[a] Based on the total sample of 1007 respondents.

Among the respondents, the two main reasons for joining SmulWeb are culinary interest and to collect recipes. These motivations are comparable to the results of the SmulWeb surveys conducted in January and February 2000 (Sanèanin 2000). Interestingly, the results of both these surveys and the survey conducted in the context of this dissertation indicate that only a minor percentage of members joined SmulWeb for social contact. Although social contact with like-minded enthusiasts may turn into a benefit once someone has become a member, it seems not to be a primary reason for joining. This is in line with Walther's findings with respect to Internet users that progress from initially asocial information gathering to increasingly social activities online (Walther 1995). Relationships require investments and they need time to develop; thus, when new members need to be attracted, community administrators should highlight (member) content over (member) contact.

The majority of respondents visit the community on a weekly basis (i.e., varying from one to three times per week). The duration of each visit lasts, for most respondents, no longer than 30 minutes. These statistics are comparable to the average of 1.7 visit per week per member, and the average visit duration of 23 minutes, measured in September 2000 (Oostveen 2001). In the same document, Oostveen reports that 37% of the members visit the community more than twice a week. The sample contains 53% respondents who visit the community at least two times a week; 31% of the respondents even visit the community on a daily basis (i.e., at least four times a week). Thus, the frequent visiting members are overrepresented. In a similar vein, the sample contains quite some respondents who spend more than the average 23 minutes per visit. Nevertheless, the survey attracted a considerable

percentage (25%) of members who visit the community only once or twice a month or less often. Moreover, 15% of the respondents spend no more than 15 minutes per visit. We may conclude that active members are overrepresented, thus absolute results may be biased upward. However, the sample has generated enough variation among the respondents to elicit meaningful correlations.

Now that we know the specifics of the research site and research methodology, we turn to the empirical chapters. Chapter 5 addresses the determinants and effects of community influence on the consumer decision process. Chapter 6 focuses on classifying community members based on their participation behavior. Finally, in Chapter 7, the netnography of SmulWeb's discussion forums is presented.

Chapter 5

Interpersonal Influence Online; Virtual Community Influence on the Consumer Decision Process

"*I've just bought some tofu in the supermarket, but actually I don't know what I can do with it. Does someone have a tasteful vegetarian recipe that requires tofu? For example, for a chocolate cake or something like that?*"
(Posted by Kim on December 19, 2002: 11.37 hours)

"*Tofu is made of soy beans and usually replaces meat in dishes. I don't think it will taste good in a cake or pie. It is often used in the Asian, Indonesian, and Japanese cuisine.*"
(Posted by Cathleen on December 19, 2002: 11.48 hours)

"*You may cube it and fry it in oil (don't forget to drain the tofu before frying). I like to make gado gado with it together with peanut sauce (you can find the recipe through SmulWeb's search engine). It is also delicious in Indonesian chicken soup, but then you should cut it into really small pieces. Good luck!*"
(Posted by Susan on December 19, 2002: 12.12 hours) [5]

5.1 INTRODUCTION

The opening quotes are successive postings taken from a SmulWeb forum thread. Within 12 hours eight people reacted to Kim's request for help. In the course of the following two months, more than 80 members read the thread. It is obvious that virtual communities of consumption are a rich and easy accessible reservoir of consumer knowledge. Community members exchange information and share experiences about consumption-related interests. When making a purchase decision, participants may turn to the virtual community to gather information, to ask for advice, or to review the opinion of expert users. After the purchase has been made they may communicate their own experiences with the consumption activity

[5] Postings are taken from SmulWeb's culinary discussion forum. Member names are pseudonyms.

to the community. The result is an ongoing process of interpersonal influence and online word-of-mouth recommendations.

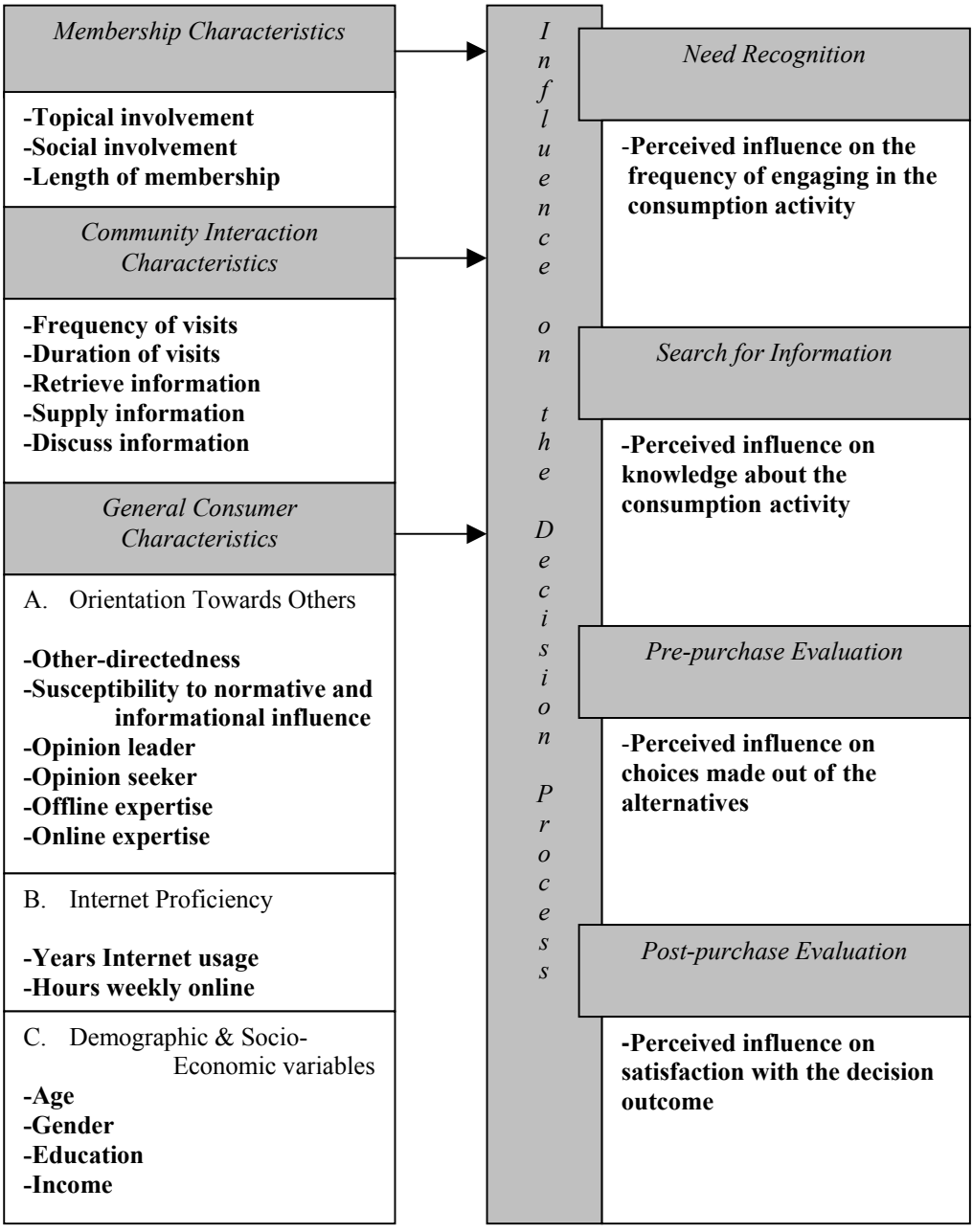
The issue we address in this chapter is the extent to which consumers are affected in their decision-making regarding consumption activities by this ongoing process of interpersonal influence and online word-of-mouth recommendations within virtual communities. Not only do we explore which factors are associated with virtual community influence, but we are also interested in possible differential effects on various stages of the consumer decision process. Are members merely influenced in their knowledge about the community's topic of interest? Or do they also change their behavior as a result of information provided by the community? Because community influence on the decision process may be different for various types of decision processes, we compare results for consumer decision-making regarding three different consumption experiences.

Section 5.2 introduces the conceptual framework and the hypotheses of the present chapter. In Section 5.3 we discuss the research methodology. Results of the regression analyses for our main model application are presented in Section 5.4, whereas Section 5.5 deals with the results of two other model applications. Finally, Section 5.6 contains a discussion of the main findings.

5.2 CONCEPTUAL FRAMEWORK

In this chapter, we focus on the question to what extent membership characteristics, community interaction characteristics, and general consumer characteristics are associated with perceived virtual community influence on the consumer decision process (Figure 5.1). The premise of the framework in Figure 5.1 is that the level of community influence is associated with membership related factors, i.e., members' attachment to the community in terms of topical and social involvement and membership length, as well as factors related to members' actual interaction behavior with the community, i.e., the frequency and duration of community visits as well as the activities undertaken while online. Of course, also general consumer characteristics such as age and education as well as members' Internet proficiency and their orientation towards others may impact the level of community influence on the consumer decision process. Together these factors may determine how members use and value the virtual community as a reference group during decision-making regarding consumption activities related to the community's topic of interest.

Figure 5.1
Community influence on the consumer decision process



In this chapter we examine the association of each block of variables with community influence on the consumer decision process. The dependent variable in Figure 5.1 is perceived virtual community influence on the consumer decision process, in short referred to as community influence. This notion of community influence covers the presumed impact of virtual community membership on various aspects of consumer decision-making regarding consumption activities. In Section 5.2.1 we discuss the factors we distinguish with respect to community influence. In Sections 5.2.2, 5.2.3, and 5.2.4 we subsequently discuss the expected association of membership characteristics, community interaction characteristics, and general consumer characteristics, respectively, with community influence on the various aspects of the consumer decision process.

5.2.1 Consumer Decision Process

Virtual community influence on the consumer decision process is a broad concept. What aspects of consumer decision-making do we take into account when we study the association between community membership and consumer behavior? Consumers generally go through seven major stages when making purchase decisions; (1) need recognition, (2) search for information, (3) pre-purchase evaluation of alternatives, (4) purchase, (5) consumption, (6) post-purchase evaluation, and (7) divestment (Blackwell et al. 2001). Virtual community membership may affect each of these phases. In this study, however, we focus on the phases that are most relevant in the context of interaction and interpersonal influence based on information exchange between virtual community members, i.e., need recognition, search for information, pre-purchase evaluation, and post-purchase evaluation. Because we do not observe actual purchase, consumption, and divestment behavior, we leave these phases out of consideration. What role do we expect the virtual community to play in the four phases of the decision process that we study?

The decision process is initiated when consumers perceive a difference between the desired state of affairs and the actual situation. Recognition of needs leads consumers into a process of making a purchase in a specific product or service class. Marketers try to stimulate consumers' awareness of needs in order to encourage consumption of their products/services. But, consumers can also activate need recognition among each other. Word-of-mouth is found more trustworthy and credible than advertising and other marketer-dominated sources (Price & Feick 1984; Swartz & Stephens 1984; Herr et al. 1991). In the context of virtual communities members may provide information about a product innovation, a newly opened restaurant, or a convenient kitchen utensil that evokes the desire of other members to try it and experience it. Thus, information and communication within virtual communities can trigger members to engage in consumption activities related to the community's topic of interest, e.g., cooking, visiting restaurants, and buying kitchen utensils.

We take influence on the frequency of engaging in these community related consumption activities as a measure of virtual community influence on need recognition. In other words, we apply a narrow definition to need recognition as the need to engage in the community's consumption activities. We assume that participation in a virtual community about culinary matters is likely to induce members' need to be involved in cooking, visiting restaurants, and buying kitchen utensils. After all, shared enthusiasm enriches the consumption activity experience, and the more gratifying the experience, the more likely consumers are to engage in the activity again and again. Besides, extended knowledge and increased expertise due to community membership could encourage consumers to explore other, new, facets of the consumption activity and engage in it more frequently.

Once consumers have decided to engage in a specific consumption activity, e.g., to cook a meal, to visit a restaurant, or to buy a kitchen utensil, the next question is what to cook, which restaurant to visit and what kitchenware to buy. In order to satisfy their needs, consumers search for information that will enable them to make informed purchase decisions. Search can thus be caused by an upcoming decision, but information acquisition also occurs on an ongoing basis (Bloch, Sherrell & Ridgway 1986). Both types of search are relevant in the context of virtual communities. Community members are able to post requests for specific information. They can also participate in discussions just to chat about their topic of interest, thereby broadening their knowledge of the subject matter (Hoffman & Novak 1996). Thus, the virtual community may be used as a knowledge reservoir that facilitates directed and undirected searches for information. The fact that online information is readily available at low cost when there's an Internet connection at hand makes the virtual community a powerful source of information for its members. We are interested in measuring virtual community influence in the information search phase. We would like to capture whether the virtual community used as an information source results in the enhancement of consumer knowledge. In this regard, we settle for perceived influence on consumer knowledge, i.e., how much influence does the virtual community have on the breadth and depth of consumers' knowledge about community related consumption activities?

The next step in the decision process is to make a choice from the possible alternatives. This is done by an evaluation of options in terms of expected benefits and narrowing the choice to the preferred alternative. Not only must consumers decide on the criteria to use in pre-purchase alternative evaluation, they must also determine the alternatives from which is chosen. These alternatives define the consideration set (e.g., Alba & Chattopadhyay 1985; Hauser & Wernfelt 1990; Brown & Wildt 1992). Virtual communities are likely to have members who are more than average specialized in the community's topic of interest and who enjoy communicating about it (Kozinets 1999). We expect that consumers who use the

specialized knowledge of other virtual community members are better able to define the expected benefits and therefore are better able to fine-tune their consideration set according to their needs (e.g., Sujan 1985; Alba & Hutchinson 1987). It is likely that because of their virtual community membership consumers develop other preferences and as a result make different consumption decisions than before they became a member. We measure this influence in the pre-purchase alternative evaluation phase by studying perceived influence on the choices made out of the alternatives, i.e., how much influence does the virtual community have on the alternatives consumers prefer with respect to the community's consumption activities?

Everyone enters into an act of consumption or a purchase with certain expectations about what the product or service will do when it is used, and satisfaction is the hoped-for outcome. In the post-purchase evaluation phase, consumers evaluate the degree to which the consumption experience produced satisfaction. When comparing what is expected to what is received, consumers may feel confirmed in their expectations, or they may feel positively or negatively disconfirmed (e.g., Oliver 1980; Tse & Wilton 1988). Companies often encourage consumers to hold very high expectations about products or services, hoping that they will make a trial purchase. However, by setting high expectations, companies risk negative disconfirmation and, as a result, less satisfied customers (Blackwell et al. 2001). Virtual communities might play a role in generating more realistic expectations. Because discussing consumption experiences with others is a common activity within communities, members are confronted with both advantages and disadvantages of products and services as experienced by actual users. This helps consumers to make more informed purchase decisions, which should lead to more satisfaction with the decision process outcome (e.g., Hoch & Ha 1986; Yi 1993). Sharing consumption experiences among community members may also reduce cognitive dissonance, i.e., doubts after a purchase (e.g., Cummings & Venkatesh 1976; Gatignon & Robertson 1985; Pyszczynski, Greenberg & LaPrelle 1985). Feedback received from other members may comfort consumers who second-guess their purchase. To capture virtual community influence in the post-purchase evaluation phase we study perceived influence on satisfaction with the decision outcome, i.e., how much influence does the virtual community have on the level of satisfaction that is achieved after purchase?

From the above discussion it has become clear that, in general, we expect that virtual communities affect consumer decision-making. However, we do not expect that their influence is similar in magnitude for each of the four phases of the consumer decision process. Specifically, we argue that community influence is largest for the information search phase. Virtual communities owe their existence to information exchange between members (Rheingold 1993; Hagel & Armstrong 1997). Whether members participate in the

community for its topical content or to socially connect with other members, contact is made by producing and processing textual or graphical member contributions. Interpersonal influence occurs through these contributions that are produced, noticed, comprehended, accepted, and stored in memory. In other words, any influence due to community membership is caused by information exchange that first leads to cognitive and affective responses, which in turn might be translated into behavior (Fishbein & Azjen 1975). Community influence on the frequency of engaging in the consumption activity, on choices made from the alternatives, and on satisfaction with the decision outcome is, therefore, most likely preceded by influence on information search leading to increased knowledge. Thus, we expect that the effect on the breadth and depth of consumer knowledge is most profound compared with the effect of community membership on the other factors related to the consumer decision process. Hence, we expect:

H1 Community influence on the information search phase is, in comparison to the other three phases of the consumer decision process, strongest.

Theoretically a vast number of variables has been identified that may be related to community influence on the consumer decision process. Our study aims to explore which factors are most strongly associated with perceived community influence per phase of the consumer decision process. Thus, we are interested in the differential effects of community influence on each of the four phases of decision-making that we take into account. In several cases, we have formulated a specific hypothesis for each phase separately. However, generally, theory does not give us reason to formulate specific hypotheses per phase of the decision process. When we refer in our hypotheses to community influence on the decision process, this should be understood as community influence on the four phases of the consumer decision process. For reasons of completeness, we include an analysis and discussion of the average overall influence on the four phases.

5.2.2 Membership Characteristics

If we want to explain community influence on the consumer decision process, there is a range of elements related to virtual community membership that can be taken into account. We make a distinction between membership characteristics and community interaction characteristics. The first set of variables gives us a base profile of community members in terms of their topical and social involvement, as well as the length of their membership. We could say that, together, they mark the contours of someone's community membership. Community interaction characteristics, on the other hand, represent the core. This second set of variables captures actual visiting behavior representing how members make use of their membership. Empirical research by, among others, Walther (1995), Kozinets (1999), and

Alon et al. (2005) have shown that the level of commitment someone has toward the community, as well as membership length, affects online interaction behavior. Thus, these factors may indirectly influence consumer decision-making through community interaction characteristics. In the context of this chapter, we examine whether membership characteristics are directly associated with community influence on the consumer decision process.

Topical involvement

Considering topical and social involvement in the virtual community we posit the following. We assume that virtual community members differ in their involvement in the community's topic of interest and their involvement in the social relationships among the members (Kozinets 1999). Highly topically involved members are seriously dedicated to the consumption activities that the virtual community focuses on. Supposedly, most of them have quite some experience with these consumption activities; others are probably better characterized as enthusiastic novices in the field (Kozinets 2002a). In either case, the virtual community offers an environment in which these topically involved members can satisfy their demand of culinary information exchange. They have joined the virtual community with the aim to increase their knowledge, to share experiences, or, simply, to express their interest in the community's subject matter. Thus, we expect that topical involvement relates to receptiveness to the virtual exchange of information and online communication about relevant consumption activities. Prior research has demonstrated that experience with a decision process lessens the need for information, and, consequently, reduces receptiveness to opinions and experiences of others (e.g., Alba & Hutchinson 1987; Srinivasan & Ratchford 1991). However, the deliberate action of pursuing the virtual community as a reference group that has expertise on the members' topic of interest renders it likely that topically involved members are influenced by the community in their decision-making regarding the consumption activities that are the central topic of the community. We expect that community influence is exerted on all four phases of the consumer decision process. Thus, we hypothesize:

H2 Topical involvement is positively related to community influence on the consumer decision process.

Social involvement

Involvement in the social relations among virtual community members is conceptualized in terms of tie strength. Tie strength is related to the degree of homophily between members, i.e., the degree of similarity, familiarity and likeability (McGuire 1985). These three components are interrelated in a circular process as they mutually reinforce one another.

Members who perceive one another to be highly similar become familiar and tend to like each other. As a result, their persuasive influence increases (Rossiter & Percy 1997). Similarity falls into two categories, namely demographic and ideological similarity. Virtual community members may reveal information about gender, age, education, et cetera, on their homepages, even including a picture. Perceived ideological similarity is likely to be high in the context of virtual communities (Wallace 1999; Kozinets 2002a). After all, a person joins a virtual community voluntarily expecting to share an interest with like-minded people. If the community does not offer the expected mind sharing, it is easy to switch to another virtual community where one does find an ideological group norm one is comfortable with (Wallace 1999). Thus, members who are embedded in the social cohesion of the virtual community are likely to maintain strong, friendly ties with other members. As a result, they are receptive to interpersonal influence and likely to take community information into account when making purchase or consumption decisions. Hence, we expect:

H3 Social involvement with the virtual community is positively related to community influence on the consumer decision process.

Membership length

When people first enter a virtual community they are not familiar with the environment, the other members, and the rules of the game (Kozinets 2002a). Knowledge on these aspects needs to be accumulated over time (Rothaermel & Sugiyama 2001). Therefore, in the first stages of getting acquainted, members engage themselves in informational and instrumental activities, while in later stages they may become more involved in symbolic exchanges that are aimed at the creation of intimacy and relational cohesiveness (Alon et al. 2005). Compare in this respect Walther's (1995) meta-analysis of computer-mediated communication, which shows that Internet users progress from initially asocial information gathering to increasingly affiliative, social activities. Relationship life cycle models describe this process in terms of establishment of the relationship and commitment to the relationship (e.g., Dwyer, Schurr & Oh 1987; Hertz 1996). Supposedly, community influence is strongest when members combine topical and social commitment. However, at some point relationships tend to become looser again and may eventually cease to exist. In the context of communities it often occurs that the core group who started the community loses interest when too many new members join. A rapid expansion of the community usually leads to an erosion of the communal atmosphere that attracted the pioneers. Hence, these members leave the community and their place is taken by new leaders (Irwin 1973; Rheingold 1993; Kim 2000). Alon et al. (2005) have demonstrated that in this separation phase members focus on individual needs. Their membership becomes once more informationally and instrumentally

oriented. Thus, we expect that community influence is likely to increase at first, but decreases again over time.

Another argument for this expected inverse U-shape relationship between membership length and community influence is the possibility that longtime members have benefited to such an extent from their membership that they have become experts over time. Moorthy, Ratchford and Talukdar (1997) have established that experts at first develop a greater need for information, because they have a larger set of attributes than novices and can make finer distinctions. Therefore, their search for information increases and, most likely, influence of the virtual community as a specialized information source is high. However, eventually they have gained so much knowledge that the need for further information is reduced. We expect that at this point they can no longer learn from the virtual community and therefore influence of the community on their decision process decreases. Therefore, we hypothesize:

H4 There is an inverted U-shape relationship between membership length and community influence on the consumer decision process.

5.2.3 Community Interaction Characteristics

Apart from the membership characteristics discussed in the previous paragraph, we also need to take into account how members actually make use of their membership when studying community influence on the consumer decision process. Community interaction is not restricted to person-to-person communication alone. Instead, we label all actions that are related to visiting the virtual community as community interaction. This second set of variables includes frequency of visits, duration of visits, and the extent to which members retrieve, supply, and discuss information during their community visit.

Frequency and duration of visits

The frequency with which someone visits the virtual community and the amount of time spent during each visit affect the extent of community influence in two ways. First of all, regular and extended visits to the virtual community imply a high level of exposure to information and communication about consumption activities that are discussed among community members. Even when members are not actively searching for information, they will passively be informed about culinary issues during their visits (e.g., Hoffman & Novak 1996). Evidence from both advertising and television news research makes clear that incidental exposure usually is not enough for consumers to recall information. Instead, repetition is necessary before information is retained and leads to learning of any significance (e.g., Naples 1979, 1997; Wicks 1992). The positive effect of exposure frequency on awareness and knowledge is also found for online advertising and news on the World Wide Web (Broussard 2000; Tewksbury, Weaver & Maddex 2001). In line with these

findings we argue that members who engage in frequent or lengthy community visits are more likely to be affected than members who engage in occasional or swift visits. We therefore expect that frequency and duration of visits are positively related to community influence on all phases of the consumer decision process.

There is another rationale for the expected positive relationship between frequency and duration of visits and community influence. We know that the impact of reference group influence and word-of-mouth recommendation depends, among other things, on the intensity of the social connection between sender and receiver, i.e., tie strength. This is defined as the combination of the amount of time, emotional intensity, intimacy and reciprocal services which characterize a tie (Granovetter 1973). Strong tie sources have more impact on consumer behavior than weak tie sources (e.g., Granovetter 1973, 1982; Johnson Brown & Reingen 1987). The greatest influence and impact usually is exerted by primary reference groups, such as the family, because of ongoing, intimate and unrestricted face-to-face interaction (e.g., Witt & Bruce 1972). Although virtual communities are not based on face-to-face relationships, members do form social relations with each other that can be very strong and intimate (Fisher, Bristor & Gainer 1996; Parks & Floyd 1996; Okleshen & Grossbart 1998). However, as a result of the lack of nonverbal cues social information takes longer to accumulate in computer-mediated environments than in face-to-face situations (Walther 1992). It is only after sufficiently frequent and extensive social exchanges that participants are able to form social impressions of other community members and develop a social connection to one another. Thus, the more often someone visits the community and the more time someone spends during each visit, the more likely it is that (strong) social connections with other members are developed and that, consequently, virtual interpersonal influence occurs. Hence, taken these two rationales together, we hypothesize:

H5 Frequency of visits is positively related to community influence on the consumer decision process.

H6 Duration of visits is positively related to community influence on the consumer decision process.

Retrieve, supply, and discuss information

Next, we turn to the kind of activities undertaken while online and how these determine the extent of interpersonal influence experienced. We distinguish between three types of online behavior relevant to virtual community influence on the consumer decision process, i.e., retrieve, supply, and discuss information. These activities determine the information flow between virtual community members as receivers and senders in a word-of-mouth network (e.g., Bristor 1990; Kiecker & Cowles 2001). Community members may be engaged in all three types of online behavior, thus switching between the roles of information receiver and

information sender. Both receivers and senders in the WOM process presumably gain from information exchange. Receivers obtain information about behavior and choices of others and get feedback about their own behavior and choices (Blackwell et al. 2001). As a result, the act of retrieving information from the community may influence the consumer decision process in various ways. Both the goal-directed search for specific information, as well as in general obtaining information about the behavior, choices, and opinions of other members may induce enthusiasm for engaging in the community's consumption activities, it may increase members' knowledge reservoir, it may alter their preferences, and it may reduce cognitive dissonance, which could lead to more satisfaction with the decision outcomes. Hence, we expect a positive relationship between the extent to which members retrieve information from the community and the four phases of the consumer decision process:

H7 Retrieving information from the community is positively related to community influence on the consumer decision process.

Senders share their positive and negative experiences out of a desire to help others make better decisions, to decrease doubts about their own behavior, or to experience feelings of prestige and power (Dichter 1966; Fitzgerald Bone 1992; Hemetsberger & Pieters 2001). Thus, we expect that the act of supplying information to the community is related to community influence on the post-purchase evaluation phase. Being able to express oneself about a positive consumption experience may boost enthusiasm for and satisfaction with the decision outcome (e.g., Richins & Bloch 1991; Sundaram, Mitra & Webster 1998). Alternatively, talking to others about disappointing experiences may relieve negative feelings and reduce dissatisfaction (e.g., Festinger 1962; Richins 1983; Sundaram et al. 1998). We expect that the other phases of the decision process, i.e., need recognition, search for information, and pre-purchase evaluation, are not affected by the extent to which members supply information to the community. Therefore, we hypothesize:

H8 Supplying information to the community is positively related to community influence on the post-purchase evaluation phase of the consumer decision process.

When members discuss information with others they actively participate in the community. This may deepen their experience with and emotional devotion towards the consumption activities of interest (Kozinets 1999). Subsequently, the act of discussing information in the community may increase the frequency of engaging in these consumption activities, it may optimize members' knowledge reservoir, develop and refine their preferences, and increase confidence in their own behavior and choices leading to more satisfaction with decision outcomes. Thus, we hypothesize:

H9 Discussing information within the community is positively related to community influence on the consumer decision process.

5.2.4 General Consumer Characteristics

The third set of independent variables consists of three components that are all related to general consumer characteristics. Besides various demographic and socioeconomic variables, we pay attention to the consumers' orientation towards others and their own Internet proficiency as explanatory variables in our model. For these last two groups of variables we have formulated hypotheses about how they affect community influence on the consumer decision process. The demographic and socioeconomic variables of age, gender, education and income are treated as control variables.

Orientation towards others

Other-directedness

Sociability and influenceability are consumer traits related to someone's orientation towards others. Both could play an important role in explaining community influence on the consumer decision process. Arndt (1967) has found that sociable persons are more likely to engage in word-of-mouth communication than those who are less sociable. Sociable persons are outgoing, they enjoy being with others, and they have a participative temperament, thus they actively take part in social networks and are influenced by these networks as a result. We assume that someone's general disposition towards warm relations with others can be translated to the computer-mediated context of virtual communities. Indeed, Utz (2000) has established that in multi-user-dungeon environments[6] sociability influences the formation of online friendships to a moderate degree. This finding indicates that the concept of other-directedness is relevant as a predictor of social involvement in the virtual community, thus indirectly affecting the level of interpersonal influence that is experienced due to community membership. In this chapter we only focus on direct associations, therefore we hypothesize:

H10 Other-directedness is positively related to community influence on the consumer decision process.

[6] Multi-user dungeons, also known as multi-user dimensions, are text-based or graphical fantasy worlds in which participants engage in role-plays. Participants create their own 'character' by choosing a name, gender, and race (e.g., demon, elf, gnome). In adventure MUDs, participants compete against each other to collect points that give them technical and social power. In social MUDs, participants just interact with and extend the virtual environment rather than compete for power over it (for more information see Reid 1999; Beaubien 1996).

Susceptibility to interpersonal influence

Besides other-directedness as a general trait, we need to take into account someone's base level of influenceability, i.e., how receptive one is to opinions and experiences of others (McGuire 1985). After all, this will determine to a large extent how the virtual community is used and valued as a reference group, thus affecting community influence on the consumer decision process. Bearden, Netemeyer and Teel (1989) have established that susceptibility to interpersonal influence consists of two components; it is manifested through either normative or informational influence. Susceptibility to normative interpersonal influence is the tendency to conform to the expectations of others (Burnkrant & Cousineau 1975). It is motivated by a desire to identify oneself with another or to gain rewards or avoid punishments by complying with group norms (Park & Lessig 1977; Bearden & Etzel 1982). We expect that influence on the decision process for community members who are susceptible to normative interpersonal influence is manifested in all phases of the decision process. Community influence on the phases of need recognition and pre-purchase evaluation implies a behavioral change. By means of adjusting their cooking frequency and aligning their preference recipe choices, thus adapting how often one cooks and what one cooks to what is the generally accepted standard in the community, members can manifest their conformity to community's customs and feel part of the group. Community influence on the other two phases is captured by measures that are not related to behavior, but to cognition (knowledge) and affect (satisfaction). In this respect the community may propagate norms about what one should know about culinary matters and how one should feel about certain culinary experiences. Hence, we expect:

H11 Susceptibility to normative interpersonal influence is positively related to community influence on the consumer decision process.

Susceptibility to informational interpersonal influence is the tendency to accept information from others as evidence about reality (Deutsch & Harold 1955). It operates through a process of internalization, which occurs when information from others increases a person's knowledge about some aspects of the environment (Bearden et al. 1989). We expect community influence due to susceptibility to informational interpersonal influence to manifest itself only in the information search phase:

H12 Susceptibility to informational interpersonal influence is positively related to community influence on the information search phase.

In virtual communities, interpersonal influence among group members takes place via online interaction. Offline behavior is not visible, unless interaction also takes place in real life. Thus, one's actual purchase and consumption behavior is not necessarily visible for the other

virtual community group members. As a result, it is easy to ignore the norms and values expressed by other community members and to behave according to your own inclination. Likewise, effective knowledge and true feelings can be more easily hidden in the virtual context than in face-to-face situations due to lack of verbal and facial expressions (e.g., Donath 1999; Wallace 1999). This means that normative interpersonal influence on the consumer decision process is presumably not very strong with respect to virtual communities. The concept of informational reference group influence, though, is appropriate. In this case, group members accept recommendations or usage by others as evidence about the nature of a product or service and use this information in their decision process (Park & Lessig 1977; Bearden & Etzel 1982). Receptiveness to either form of interpersonal influence is likely to increase community influence on the consumer decision process, but the effect of informational influence is expected to be stronger than the effect of normative interpersonal influence. Hence:

H13 The relationship between susceptibility to interpersonal influence and community influence on the consumer decision process is stronger for the informational component than the normative component.

Opinion leader

Next, we discuss our expectations concerning the relationships between self-perceptions about opinion leadership and expertise in the area of the virtual community's topic of interest and community influence on consumer decision-making. Opinion leaders are assumed to be knowledgeable about the topic they are involved in (Jacoby & Hoyer 1981; Richins & Bloch 1986). Furthermore, opinion leadership is associated with giving information to, sharing experiences with, and influencing others (Hawkins, Best & Coney 1983; Rogers 1983). The more involved opinion leaders are in a certain topic of interest, the more likely it is they talk to others about it (Venkatraman 1990). The question is to what extent these interactions affect their own decision processes, given the fact that they have a good command of cooking and know a lot about culinary matters in general. We expect that until a certain level of opinion leadership the community offers a learning environment that positively affects all four phases of the consumer decision process. After all, conversations are not only initiated to give, but also to seek information and receive feedback (Yale & Gilly 1995). However, when opinion leaders have become true, overall experts, their need for information exchange eventually decreases (Moorthy et al. 1997). After this point of saturation, we expect community influence to diminish. Therefore, we hypothesize:

H14 There is an inverted U-shape relationship between culinary opinion leadership and community influence on the consumer decision process.

Opinion seeker

Measures of opinion leadership generally not only reflect the extent to which information from individuals is sought after by others, but they also include the extent to which individuals seek information themselves (e.g., Reynolds and Darden 1971; Flynn, Goldsmith and Eastman 1996). Therefore, we have included culinary opinion seeking as a separate factor in our framework. We presume that members who consider themselves opinion seekers are extensively engaged in exchanging information with other virtual community members. In line with hypotheses 8 and 10, which presume that the retrieval and discussion of culinary information positively affects the consumer decision process, we expect culinary opinion seekers to experience a positive influence of their community membership on the various phases of the consumer decision process. Thus, we hypothesize that:

H15 Culinary opinion seeking behavior is positively related to community influence on the consumer decision process.

Offline expertise

Besides opinion leadership, we have included expertise as a separate factor in our framework. We distinguish in this respect between self-reported expertise relative to traditional reference groups (offline expertise), and self-reported expertise relative to other virtual community members (online expertise). We already mentioned research done by Moorthy et al. (1997), who established that experts at first develop a greater need for information, because they have a larger set of attributes than novices and can make finer distinctions. If someone's level of culinary expertise is high compared with traditional reference groups such as family, friends, and acquaintances, then the communication and interaction with other virtual community members increases in importance. After all, in the virtual community one finds others who are knowledgeable about the community's subject matter and therefore they form a more valuable information source during decision-making than the offline sources that have little expertise. As a result, we expect a positive relationship between offline expertise and community influence on the consumer decision process. Hence, we hypothesize:

H16 Offline culinary expertise is positively related to community influence on the consumer decision process.

Online expertise

In contrast, we expect a negative relationship between online expertise and community influence on decision-making. Members who are highly knowledgeable about the community's topic of interest compared with other members may no longer benefit from their virtual community membership in terms of informational value. This situation might

resemble Moorthy et al.'s finding that experts eventually have gained so much knowledge that the need for further information is reduced. Members who are *the* culinary experts of the community do not need the advice or opinions of members who are less knowledgeable to help them to make better purchase or consumption decisions. They might turn to other sources to get even more specialized information that induces their enthusiasm, increases their knowledge, develops their preferences, and raises their satisfaction with decision outcomes. Therefore, we expect that the influence of the community on the consumer decision process decreases as culinary expertise relative to other members increases. Hence:

H17 Online culinary expertise is negatively related to community influence on the consumer decision process.

Internet proficiency

Years Internet usage and hours weekly online

The number of years someone has used the Internet and the number of hours someone spends online represent someone's level of Internet proficiency. It is important to include these factors in our model, because we know that Internet users become more purposeful, efficient, and self-assured using the Web over time due to navigational skill development and getting in general accustomed to the computer-mediated environment (e.g., Walther 1995: Utz 2000; Alon et al. 2005). In this regard we know, for example, that longtime Internet users are more likely to use the Internet for online buying and for seeking advice than short-time Internet users (Horrigan & Rainie 2002). Members who have more Internet experience may therefore use and value the virtual community very differently in the context of purchase and consumption decision-making from members who are less Internet proficient. Overall, we expect that both factors related to Internet proficiency have a positive relationship with community influence on the consumer decision process. After all, members who are computer-savvy and Internet literate are better able to benefit from their virtual community membership during decision-making, because they know how to navigate through, participate in and evaluate online communication and interaction processes. Hence, we expect:

H18 The number of years someone has been using the Internet is positively related to community influence on the consumer decision process.

H19 The number of hours someone spends online per week is positively related to community influence on the consumer decision process.

Before we proceed to the discussion of the research methodology, we present a summary of all the hypotheses in Table 5.1.

Table 5.1
Overview of the hypotheses

Hypotheses and predicted signs		
Virtual Community Influence		
VCI on search for information stronger than on other phases	(H1)	>
Membership Characteristics		
Topical involvement and VCI on CDP	(H2)	+
Social involvement and VCI on CDP	(H3)	+
Membership length and VCI on CDP	(H4)	∩
Community Interaction Characteristics		
Frequency of visits and VCI on CDP	(H5)	+
Duration of visits and VCI on CDP	(H6)	+
Retrieve information and VCI on CDP	(H7)	+
Supply information and VCI on POST	(H8)	+
Discuss information and VCI on CDP	(H9)	+
General Consumer Characteristics		
Other-directedness and VCI on CDP	(H10)	+
Susceptibility to normative influence and VCI on CDP	(H11)	+
Susceptibility to informational influence and VCI on search for information	(H12)	+
INFO.INF and VCI on CDP stronger than NORM.INF	(H13)	>
Opinion leader and VCI on CDP	(H14)	∩
Opinion seeker and VCI on CDP	(H15)	+
Offline expertise and VCI on CDP	(H16)	+
Online expertise and VCI on CDP	(H17)	–
Years Internet usage and VCI on CDP	(H18)	+
Hours weekly online and VCI on CDP	(H19)	+

VCI = Virtual Community Influence; CDP = Consumer Decision Process (i.e., phases of need recognition, search for information, pre-purchase evaluation, and post-purchase evaluation); NR = Need Recognition; SFI = Search For Information; PRE = Pre-Purchase Evaluation; POST = Post-Purchase Evaluation; INFO.INF = Susceptibility to Informational Influence; NORM.INF = Susceptibility to Normative Influence.

5.3 RESEARCH METHODOLOGY

5.3.1 Regression Models

So far we have discussed our model in general terms. However, when operationalizing it we need to apply it to a certain context. What decision process are we exactly talking about? The core concern of the community under study is recipe exchange between members. The community's recipe database contains more than 200,000 recipes. It covers recipes in basically all categories such as breakfast, soups, barbecue, side dishes, desserts, and appetizers. Furthermore, the database consists of recipes from a broad variety of cuisines like Italian, Japanese, vegetarian, and diet cooking. In many cases, one can find several recipes

for the same dish, each with its own special flavor. Recipes are used to guide the cooking process. Decisions commonly made with respect to cooking include, among others, decisions about what to cook and how to put together a meal, as well as decisions about which ingredients to use, how to prepare food products, and the cooking time. For all these instances, the community offers its members multiple opportunities for assistance. Therefore, we have chosen the cooking decision process as the base application of our models. We describe these models below.[7]

$$
\begin{aligned}
&(1)\ \text{CO.FRQNC} = \\
&(2)\ \text{RC.KNWL} = \\
&(3)\ \text{RC.CHOIC} = \\
&(4)\ \text{CO.STFCT} =
\end{aligned}
\left\{
\begin{array}{l}
\beta_0 + \beta_1\,\text{TOP.INVM} + \beta_2\,\text{SOC.INVM} + \beta_3\,\text{LENGTH} + \beta_4\,\text{LENGTH}^2 + \\
\beta_5\text{FREQUENC} + \beta_6\,\text{DURATION} + \beta_7\,\text{RETRIEVE} + \beta_8\text{SUPPLY} + \\
\beta_9\,\text{DISCUSS} + \beta_{10}\,\text{OTHERDIR} + \beta_{11}\,\text{NORM.INF} + \\
\beta_{12}\,\text{INFO.INF} + \beta_{13}\,\text{OPN.LEAD} + \beta_{14}\,\text{OPN.LEAD}^2 + \\
\beta_{15}\,\text{OPN. SEEK} + \beta_{16}\,\text{OFFEXPER} + \beta_{17}\,\text{ONEXPERT} + \\
\beta_{18}\,\text{WEBYEARS} + \beta_{19}\,\text{WEBHOURS} + \beta_{20}\,\text{AGE} + \\
\beta_{21}\,\text{GENDER} + \beta_{22}\,\text{EDUCATION} + \beta_{23}\,\text{INCOME} + \varepsilon
\end{array}
\right\}
$$

The dependent variables in our model are the four phases of the consumer decision process, as explicated in the discussion of the conceptual framework in Section 5.2.1. Each of the four models describes community influence on the cooking decision process as a function of membership characteristics, community interaction characteristics and general consumer characteristics. For community influence on the need recognition phase, we study the perceived influence on cooking frequency (CO.FRQNC). In this respect, we ask participants whether they cook more often due to their community membership. For community influence on the information search phase, we study the perceived influence on recipe knowledge (RC.KNWL). This includes knowledge about dishes & courses, cuisines, ingredients, and food preparation. For community influence on the pre-purchase evaluation phase, we study the perceived influence on recipe choice (RC.CHOIC). We ask participants whether they choose for other dishes and courses due to their community membership. For community influence on the post-purchase evaluation phase, we study perceived influence on satisfaction with cooking results (CO.STFCT). Have participants become more satisfied with their cooking results due to their community membership?

Besides these four dependent variables, our model contains 21 independent variables representing membership characteristics: TOP.INVM is a member's involvement with the

[7] Note that these models define linear and curvilinear relationships, because some of our hypotheses require the testing of a quadratic association. However, in all cases, our results indicated that the linear models outperformed the models containing quadratic relationships. Therefore, in the result section we will only report the linear associations in the tables containing the regression results.

community's topic of interest, SOC.INVM is a member's involvement with the social relations within the community, and LENGTH is the length of someone's membership. The community interaction characteristics are represented by FREQUENC, which is the frequency of someone's visits to the community, DURATION, which is the duration of someone's visits to the community, RETRIEVE, which is the extent to which a member retrieves information from the community, SUPPLY, which is the extent to which a member supplies information to the community, and DISCUSS, which is the extent to which a member discusses information in the community.

Finally, general consumer characteristics are included: OTHERDIR is a member's other-directedness, NORM.INF is a member's susceptibility to normative influence, INFO.INF is a member's susceptibility to informational influence, OPN.LEAD is the extent to which a member is a culinary opinion leader, OPN.SEEK is the extent to which a member is a culinary opinion seeker, OFFEXPERT is a member's culinary expertise level relative to offline reference groups, ONEXPERT is a member's culinary expertise level relative to the other community members, WEBYEARS is the number of years a member has been using the Internet, WEBHOURS is the number of hours a member is weekly online. AGE, GENDER, EDUCATION, and INCOME speak for itself. ε is an error term that is assumed to be normally distributed with a mean of zero.

5.3.2 Measurements

As explicated in Chapter 4, we have collected data for this study by means of an online survey among the members of the virtual community SmulWeb. Our sample consists of 1007 respondents. Details about SmulWeb, questionnaire development, data collection, and sample characteristics can be found in Chapter 4. The original survey is reported in Appendix A. Descriptives of the measurements can be found in Appendix D. In this paragraph, we discuss the measurements of the variables that are relevant to the study that is the focus of this chapter.

Table 5.2 describes the measurements for community influence on the cooking decision process. The constructs **perceived community influence on cooking frequency**, **recipe choice**, and **satisfaction with cooking results** are operationalized by single statements that are introduced with a lead-in. Respondents report on a five-point rating scale (1-5) the extent of their (dis)agreement. The construct **perceived community influence on recipe knowledge** consists of various knowledge aspects. In the operationalization, items were included that are used in the community as key fields for information exchange between members, i.e., knowledge about cuisines, preparation methods, ingredients, as well as dishes and menus. We take perceived community influence on knowledge about these four categories as formative (cause) indicators of the construct perceived community influence on

recipe knowledge, resulting in the creation of an index rather than a scale (cf., Bollen & Lennox 1991; Diamantopoulos & Winklhofer 2001; Burke Jarvis, Mackenzie, Podsakoff 2003). Respondents were asked to report on a five-point rating scale (1-5) the degree of community influence on their knowledge of each aspect separately. Note that the unidimensionality of the index and its internal consistency are not relevant (Diamantopoulos & Winklhofer 2001). What counts is whether the items are a valid constitution of the construct perceived community influence on recipe knowledge in the research context. The ratings of the resulting index are aggregated and the mean is used for further analysis.

Table 5.2
Measurements for community influence on the cooking decision process

Community influence on the cooking decision process	
Perceived influence on cooking frequency	Because of my SmulWeb-membership, I cook more frequently. [a]
Perceived influence on recipe knowledge	Extent of influence on knowledge about: [b] (a) Cuisines: e.g., Italian, vegetarian, multicultural (b) Food preparation: e.g., barbecue, grill, steam (c) Ingredients: e.g., spices, dairy, vegetables (d) Dishes and menus
Perceived influence on recipe choice	Because of my SmulWeb-membership, I choose for other types of dishes and menus. [a]
Perceived influence on satisfaction with results	Because of my SmulWeb-membership, I am more satisfied with my cooking results. [a]

[a] Statement (5-point rating scale: 1=strongly disagree / 5 = strongly agree).
[b] Evaluation (5-point rating scale: 1 = no influence / 5 = a lot of influence).

Table 5.3 describes the measurements for membership characteristics. The constructs **topical involvement** and **social involvement** are measured by means of multiple items that are perceived as reflective (effect) indicators of the underlying constructs (Fornell & Bookstein 1982; Bollen & Lennox 1991). For the development of the topical involvement scale that measures member involvement in culinary matters, we adapted the existing scales 'Cooking Enjoyment' by Dickerson and Gentry (1983) and 'Shopping Involvement' by Lumpkin (1985). Item generation was further based on the ongoing netnography of the community under study, including in-depth interviews with several community members. The scale was not meant to be multi-dimensional, however, the initial solution for this scale resulted in two factors. The second factor consisted solely of item g ("I choose the restaurants I visit always with care"). The test for scale reliability revealed that this item did not meet the minimum

Table 5.3
Measurements for membership characteristics

Membership characteristics	
Topical involvement α = 0.85	(a) I love to cook. (b) I am a good cook. (c) I regularly organize dinner parties for family and/or friends. (d) I am interested in updating my culinary knowledge. (e) I follow the media for tips, recipes, and culinary news. (f) I know about new food product and/or drinks. (g) I choose the restaurants I visit always with care. (h) I spend a lot of money on tasty food and drinks. (i) When I talk to my friends, recipes and cooking are a regular topic of conversation. [a]
Social involvement α = 0.91	(a) I really care about creating a good atmosphere on SmulWeb. (b) I could just as well be a member of another online culinary community (c) I am proud to tell others that I am a SmulWeb-member. (d) I find interaction with other members important. (e) I spend a lot of time keeping in touch with other members. (f) I enjoy communicating with other members. (g) Through SmulWeb, I have built meaningful relationships with people I did not know before. (h) I already knew most of the members that I am in frequent contact with within the community, before I became a member. (i) I am interested in the personal background of other members. [a]
Length of membership	How long have you been a registered member of SmulWeb? [b]

[a] Statement (5-point rating scale: 1=strongly disagree / 5 = strongly agree).
[b] Fixed-response (5 categories: 1=<6 months; 2=6-12 months; 3=12-18 months; 4=18-24 months; 5=≥24 months).
Items printed in gray are deleted in the purification process.

value of 0.50 for item-to-total correlation (Anderson, Gerbing & Hunter 1987).[8] Restaurant visiting is an activity that is usually undertaken in a group. As such, choosing a restaurant is less individually determined than the other statements measuring topical involvement. Based on this theoretical justification, the item was deleted. After deletion, unidimensionality was confirmed and a satisfactory alpha was reached ($\alpha = 0.85$).

The scale for social involvement measures member involvement in the social relationships among community members. It is partly based on the scale 'Organizational Commitment' by Mowday, Steers and Porter (1979). As for the scale topical involvement, item generation for measuring social involvement is further based on the ongoing netnography of the community under study, including in-depth interviews with several community members. The initial factor solution resulted in two factors, although the scale was not meant to be multi-dimensional. The items b ("I could just as well be a member of another online culinary community") and h ("I already knew most of the members that I am in frequent contact with within the community, before I became a member") loaded on a separate factor from the other items. Again, the test for scale reliability revealed that these items did not meet the minimum value of 0.50 for item-to-total correlation. Because item b refers to a situation in which alternatives to the community under study are readily available, which may be different from the perceived situation by the respondents, we decided to delete it. Item h has presumably caused interpretation problems because of difficult wording not detected in the pre-testing. This item was, therefore, also deleted. Unidimensionality of the social involvement construct could be confirmed after deleting items b and h ($\alpha = 0.91$). **Length of membership** is measured by means of fixed-response alternatives.

Table 5.4 describes the measurements for community interaction characertistics. **Frequency of visits** and **duration of visits** are measured by means of fixed-response alternatives. The constructs **retrieve information, supply information**, and **discuss information** are measured by means of an index with formative indicators. The survey listed 16 activities that SmulWeb-members can undertake while they visit the community. Respondents reported on a five-point rating scale (1-5) how often they engage in each of them when they visit the community. The summed and averaged ratings of the activities that refer to, respectively,

[8] A three-step item purification and dimensionality test procedure was applied consisting of the following steps (Anderson, Gerbing & Hunter 1987): (1) inter-item and item-to-total correlations were computed for each of the items. The requirement for retaining an item was a significant correlation coefficient at the 0.01 level; (2) Cronbach's alpha was computed and, in case of a low alpha, the item with the lowest item-to-total correlation was removed; and (3) an exploratory factor analysis was performed using an eigenvalue of 1.0 and factor loadings of 0.5 as the cut-off points. The deleted items are printed in grey.

retrieving information, supplying information, and discussing information make up the overall score on the relevant variables.

Table 5.4
Measurements for community interaction characteristics

Community interaction characteristics	
Frequency of visits	In general, how often do you visit SmulWeb per week/month? [a]
Duration of visits	In general, what is the duration of a single visit to SmulWeb? [b]
Retrieve information	When visiting SmulWeb, to what extent do you engage in [c] (a) Retrieving recipes (b) Retrieving articles (c) Retrieving reviews (d) Posing a question / requesting advice
Supply information	When visiting SmulWeb, to what extent do you engage in [c] (a) Submitting recipes (b) Submitting articles (c) Submitting reviews (d) Reacting to a question / request for advice
Discuss information	When visiting SmulWeb, to what extent do you engage in [c] (a) Starting a new thread in a forum discussion (b) Participating in a forum discussion (c) Participating in a chat session

[a] Fixed-response (7 categories: 1=less often; 2=2-3 x p/m; 3=1 x p/w; 4=2-3 x p/w; 5=4-5 x p/w; 6=5-6 x p/w; 7=several times p/d).
[b] Fixed-response (6 categories: 1=<15 min; 2=15<30 min; 3=30<60 min; 4=60<90 min; 5=90<120 min; 6=≥120 min).
[c] Evaluation (5-point rating scale; 1= I never do it / 5 = I do it very often).

Tables 5.5 and 5.6 contain the measurements for the variables relating to general consumer characteristics. To measure the construct **other-directedness**, respondents answered on a five-point rating scale (1-5) how much importance they attach to warm relationships with others. To measure **susceptibility to interpersonal influence**, we used the existing scale by Bearden et al. (1989). This scale consists of eight reflective indicators measuring susceptibility to normative interpersonal influence and four reflective measuring susceptibility to informational interpersonal influence.

Table 5.5
Measurements for general consumer characteristics (I)

General consumer characteristics: Orientation towards others	
Other-directedness	How important are warm relationships with others for you? [a]
Susceptibility to normative interpersonal influence α = 0.87	(a) I don't purchase trendy products until I am sure my friends approve them. (b) It is important to me that others like the products I buy. (c) I choose brands that I know my friends approve of. (d) In the company of others, I purchase the brands they expect me to buy. (e) I'd like to know which products make a good impression on others. (f) I achieve a sense of belonging by purchasing the same products as others. (g) If I want to be like someone, I try to buy the same brands that they buy. (h) I often identify with other people by purchasing the same products and brands they purchase. [b]
Susceptibility to informational interpersonal influence α = 0.83	(a) To make sure I buy the right product/brand, I often observe what others are buying and using. (b) If I have little knowledge about a product, I ask my friends about their experiences. (c) I often consult other people to help choose the best available alternative from a product class. (d) I frequently gather information from family and/or friends before buying a product. [b]
Opinion leader α = 0.93	(a) I am often asked for advice about culinary matters. (b) Other people find my opinion about culinary matter valuable. (c) My friends come to me more often than I go to them for advice about culinary matters. (d) I feel that I am generally regarded as a good source for advice about culinary matters. [b]
Opinion seeker α = 0.82	(a) I often exchange information about culinary matters with friends. (b) Other people's opinions about culinary matters do not count for me. (c) I often seek advice of others about culinary matters. (d) Other people usually give me good advice about culinary matters. [b]

[a] Evaluation (5-point rating scale: 1 = very unimportant / 5 = very important).
[b] Statement (5-point rating scale: 1=strongly disagree / 5 = strongly agree).
Items printed in gray are deleted in the purification process.

In line with Bearden, Netemeyer and Teel (1989), the initial factor solution resulted in three factors representing informational, utilitarian, and value-expressive interpersonal influence. However, they performed further scale validation tests, which revealed that the utilitarian and value-expressive factors were not discrete. Because our findings corresponded to the misleading three-factor solution found in the first phase of the original scale development, unidimensionality for the two components was tested separately. In both cases, unidimensionality was confirmed, however item-to-total correlations revealed that, again in both cases, one item did not meet the minimum value of 0.50 ("I often identify with other people by purchasing the same products and brands they purchase" for susceptibility to normative influence; "To make sure I buy the right product/brand, I often observe what others are buying and using" for susceptibility for informational influence). These items were deleted. Another factor analysis with the remaining 10 items was performed in which a two-factor solution with the expected distribution of items was confirmed. Scale reliabilities resulted in Cronbach alphas of 0.87 and 0.83 respectively.

The multi-item scale measuring whether someone is a **culinary opinion leader/seeker** is based on the work of Reynolds and Darden (1971) and Flynn et al. (1996). For the survey, we have picked four reflective indicators for each factor and modified them to the context of culinary matters. The initial factor analysis revealed a two-factor solution. However, the distribution of items across the two components did not match expectations. Item a in the opinion seeker scale ("I often exchange information about culinary matters with friends") loaded on both factors. The wording of this item indeed is ambiguous; it cannot be concluded whether the respondent gives or receives information. Including this item in the scale for opinion leadership does not really improve statistical results, whereas including it in the scale for opinion seeker deteriorates statistical results in the tests for scale reliability. Item b of the opinion seeker scale showed a small loading on the opinion seeker factor in the initial solution, but it did not meet the minimum value of 0.50 for item-to-total correlation. Consequently, both items were deleted. Two-dimensionality was confirmed with the remaining six items. The scale measuring opinion leadership has an alpha of 0.93, the alpha for the scale for opinion seeker reached a value of 0.82.

To measure the construct relative online culinary expertise (Table 5.6), respondents were asked to judge their level of culinary knowledge relative to other community members on a five-point rating scale (1-5) varying from little knowledge to a great deal of knowledge. The construct relative offline culinary expertise is measured by means of an index with formative indicators. It is operationalized as the summed and averaged level of culinary knowledge relative to (1) family / household members, (2) relatives, (3) friends, and (4) acquaintances. In this way, we can examine the difference between someone's culinary knowledge level

relative to the online reference group (i.e., other community members – **online expertise**) and relative to traditional reference groups (i.e., family, relatives, friends, and acquaintances – **offline expertise**).

Table 5.6
Measurements for general consumer characteristics (II)

General consumer characteristics: Orientation towards other (cont.)	
Offline expertise	Extent of culinary knowledge compared with: [a] (a) Family / household members (b) Relatives (c) Friends (d) Acquaintances
Online expertise	Extent of culinary knowledge compared with: [a] (a) Other SmulWeb-members
General consumer characteristics: Internet proficiency	
Years of Internet experience	Since when do you use the Internet? [b]
Hours weekly online	How many hours do you spend online per week for: [c] (a) Private purposes (b) Business purposes (c) Study purposes
General consumer characteristics: Demographic & Socioeconomic variables	
Age	What is your age? [d]
Gender	What is your gender? [e]
Education	What is your highest achieved level of education? [f]
Income	What is your total household's monthly gross income?[g]

[a] Evaluation (5-point rating scale: 1 = little or no knowledge / 5 = a great deal of knowledge).
[b] Fixed-response (7 categories: 1=<1 yr; 2=1<2 yrs; 3=2<3 yrs; 4=3<4 yrs; 5=4<5 yrs; 6=5<6 yrs; 6=≥6 yrs).
[c] Open question (Scores are summed and recoded into 5 categories: 1=≤5 hrs; 2=6≤10 hrs; 3=11≤15 hrs; 4=16≤20 hrs; 5=>20 hrs).
[d] Open question (values range from 6-80).
[e] Fixed-response (2 categories: recoded into dummy variable representing males vs. females).
[f] Fixed-response (5 categories: "no education" category recoded into "primary education"; 2=primary education; 3=lower secondary education; 4=intermediate secondary education; 5=higher education).
[g] Fixed-response (6 categories: "don't know / don't want to answer" category coded system-missing; 1=<€ 1001 p/m; 2=€ 1001-1500 p/m; 3=€ 1501-2000 p/m; 4=€ 2001-2500 p/m; 5=> € 2500 p/m).

Like the construct of offline expertise, the construct **hours weekly online** is considered to consist of several constituents. The survey asked respondents to report the average amount of time spent online for private, business, and study purposes (open questions). For the study reported here, we are not interested in the distribution of time spent online for these different purposes. Instead, focus lies on total time spent online as an indicator of computer literacy and Internet experience. For each respondent, answers were summed to get a total score for time spent online. Then, scores were recoded into five categories. The construct **years of Internet experience** is measured by means of fixed-response alternatives. Finally, age was measured by an open question, whereas gender, education, and income were measured by means of fixed-response alternatives.

5.4 RESULTS

The results of our regression models that are estimated with the OLS algorithm in SPSS by means of the enter method are summarized in Tables 5.7-10. We have structured our discussion in subparagraphs successively addressing the association between each block of independent variables and community influence on the consumer decision process. For ease of use, we have divided the results from the total regression model into three separate tables (Tables 5.8-10) corresponding with the three blocks of independent variables. Note that the values reported in these tables are results from an estimation of the complete model including all independent variables. Appendix B lists all the results together in one table. The R^2 of the models varies from 0.20 (adjusted R^2 = 0.17 / F statistic = 7.18) for community influence on cooking frequency, as well as community influence on recipe choice (adjusted R^2 = 0.17 / F statistic = 7.12), to 0.28 (adjusted R^2 = 0.26 / F statistic = 11.46) for community influence on recipe knowledge.

Appendix C contains the correlation matrix for the independent variables in our research framework. Overall, we find no exceptionally high correlations among the variables, which indicate that multicollinearity is not an issue. This is confirmed when we examine the condition indices and the regression coefficient variance-decomposition matrix. Although the condition index is greater than the threshold value of 30.00 in three cases (Hair, Anderson, Thatham & Black 1998; p. 220), we find in none of these cases that two or more variance decomposition values exceed the threshold value of 0.90. Thus, there is no high degree of multicollinearity among the independent variables. This conclusion is supported by the results of the tolerance and VIF measures. No VIF value exceeds 10.00 and tolerance values show that collinearity does not explain more than 10 percent of any independent variable's

variance. Consequently, the interpretation of our regression results is not hampered by multicollinearity.

Table 5.7
Community influence on the cooking decision process

Need recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
Perceived influence on cooking frequency	**Perceived influence on recipe knowledge**	**Perceived influence on recipe choice**	**Perceived influence on satisfaction with result**	**Average overall influence on four phases**
2.3	3.2	3.1	2.8	2.9
(1.4)	(1.1)	(1.4)	(1.4)	(1.1)

Mean scores are measured on 5-point rating scales (1-5). Standard deviations are annotated in parentheses.

Table 5.7 contains the mean scores of community influence on the cooking decision process. We expected community influence to be strongest in the information search phase compared with the other three phases (H1). Indeed, we find that the mean score of the perceived influence on recipe knowledge is highest. T-tests indicate that community influence on search for information is significantly ($p < 0.01$) higher than community influence on need recognition and post-purchase evaluation. Community influence is not significantly different between the information search and pre-purchase evaluation phases ($t = 1.89$, $p = 0.06$). Thus, in case of the cooking decision process, community influence is most profound in the information search phase, while influence on members' pre-purchase alternative evaluation forms a close runner-up.

5.4.1 Membership Characteristics

Topical involvement

The regression results in Table 5.8 indicate that there is no significant relationship between community influence and involvement in the community's topic of interest for any of the phases of the consumer decision process. Thus, H2 is not supported. Since respondents have reported a very high mean for topical involvement (4.02 on a 1-5 rating scale with a standard deviation of 0.73), we may not conclude that topical involvement is unimportant. Presumably, variance is too small to result in a significant relationship with community influence. However, only (somewhat) topically interested individuals become a member of the community. Anyway, we cannot conclude that respondents who have a higher interest in

culinary matters also experience more community influence on their cooking decision process.

Social involvement

We find a positive relationship between social involvement and community influence on all four phases of the cooking decision process. Consequently, H3 is supported. This finding extends traditional theories about interpersonal influence in face-to-face situations to the computer-mediated context of virtual communities. The degree to which people are tied in a social relationship is an important determinant of interpersonal influence between consumers both in real life as well as in virtual settings. The stronger the tie, the higher the level of interpersonal influence.

Membership length

For the relationship between membership length and community influence on the consumer decision process we expected an inverted U-shape curve (H4). However, entering a quadratic membership length variable to our regression models reduced or only marginally improved the adjusted R squares, it failed to lead to significant F-statistic changes, and it produced merely insignificant linear and quadratic associations. Consequently, H4 is not supported.[9] Then, we decided to stick to regression models in which only the linear association of membership length and community influence was estimated. Results from these models are reported in Table 5.8 and show that community influence on search for information and post-purchase evaluation is positively related to membership length. Longtime members experience a higher degree of community influence on their recipe knowledge and satisfaction with cooking results than members who have joined the community more recently. In contrast, we find that community influence on need recognition and pre-purchase evaluation is not related to membership length. Thus, membership length is not associated with changes in cooking behavior. Overall, we can conclude that members become more informed about culinary matters in the course of their membership, which increases the likelihood that their expectations are satisfied.

[9] The reason why we do not find support for an inverted U-shape relationship between membership length and community influence could be caused by the different paces at which members progress in the membership life cycle. The graphic representations of the relationships between membership length and community influence on the consumer decision process make clear that, for all phases, the group of members who have been a member for more than six months, but less than a year report weaker community influence than the groups who have been a member for a shorter or longer period of time. This could mean that for some members the membership life cycle lasts about a year in which community impact increases over the first half year, and decreases again during the last half year. Others obviously take more than two years to go through the stages of establishment, commitment, and decline.

Table 5.8
Regression results for the cooking decision process (I)

	Need Recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on cooking frequency	**Perceived influence on recipe knowledge**	**Perceived influence on recipe choice**	**Perceived influence on satisfaction with result**	**Average overall influence on four phases**
Membership characteristics					
Topical involvement	-0.02 (0.68)	0.01 (0.87)	-0.06 (0.28)	-0.04 (0.48)	-0.04 (0.47)
Social involvement	**0.12 (0.05)**	**0.18 (0.00)**	**0.13 (0.03)**	**0.15 (0.01)**	**0.17 (0.00)**
Length of membership	0.05 (0.25)	**0.10 (0.01)**	-0.01 (0.74)	**0.10 (0.01)**	0.07 (0.07)

The table contains standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

5.4.2 Community Interaction Characteristics

Frequency and duration of visits

Results in Table 5.9 indicate that a higher frequency of visits implies more community influence on all phases of the cooking decision process. Thus, H5 is supported. The relationship between frequency of visits and community influence is especially strong in the phases of pre- and post purchase evaluation. Members who visit the community often report more community influence on their recipe choices and satisfaction with cooking results, than members who do not visit the community frequently. Visit duration, however, is not related to community influence. Consequently, H6 is not confirmed.

Retrieve, supply, and discuss information

We find support for our contention that retrieving information from the community is positively related to influence on the consumer decision process (H7). Members who retrieve a lot of information report a fairly strong community influence on their recipe knowledge, their recipe choices, and their satisfaction with their cooking results. There is no significant association between retrieving information and community influence on cooking frequency. Maybe, respondents' engagement in cooking activities is not so much influenced by the amount of culinary information retrieved from the community, but by everyday necessity and routine. Furthermore, we find no support for our hypotheses regarding the relationships between supplying and discussing information and community influence (H8 and H9). Being

involved in the active supply of information and participation in discussions with other members does not significantly affect community influence on consumer decision-making.

A noteworthy result is the significant negative relation between discussing information and community influence on search for information. Thus, the more members are engaged in chat sessions and discussion forums, the less community influence they experience on their recipe knowledge. This could mean two things; it could be that merely culinary experts participate in the community's chat room and discussion forums. Having a high initial level of culinary knowledge would decrease the learning effect resulting from participation in discussions. Although we find a correlation of 0.21 ($p < 0.01$) between online culinary expertise and discussing information in the community, this is not high enough to substantiate this explanation. Another explanation could be that information exchange within the community's chat room and discussion forums has a predominant social character, i.e., information is not factual, aimed at exchanging knowledge, but it is more experiential, aimed at socializing and recreation. Indeed, the correlation between social involvement and discussing information reaches a value of 0.50 ($p < 0.01$).

Table 5.9
Regression results for the cooking decision process (II)

	Need Recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on cooking frequency	**Perceived influence on recipe knowledge**	**Perceived influence on recipe choice**	**Perceived influence on satisfaction with result**	**Average overall influence on four phases**
Community interaction characteristics					
Frequency of visits	**0.13 (0.01)**	**0.12 (0.01)**	**0.22 (0.00)**	**0.21 (0.00)**	**0.21 (0.00)**
Duration of visits	0.05 (0.23)	-0.01 (0.88)	0.05 (0.22)	-0.01 (0.88)	0.03 (0.46)
Retrieve information	0.05 (0.30)	**0.22 (0.00)**	**0.11 (0.01)**	**0.09 (0.03)**	**0.14 (0.00)**
Supply information	-0.01 (0.91)	-0.04 (0.49)	-0.07 (0.19)	-0.01 (0.84)	-0.04 (0.46)
Discuss information	0.01 (0.78)	**-0.11 (0.02)**	-0.04 (0.38)	-0.07 (0.13)	-0.06 (0.19)

The table contains standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

5.4.3 General Consumer Characteristics

Orientation towards others

Regarding members' orientation towards others and its subsequent effect on community influence on the cooking decision process, we can draw two straightforward conclusions (see Table 5.10). It is especially someone's susceptibility to normative interpersonal influence and general culinary opinion seeking behavior that increase the likelihood of community influence on all phases of the cooking decision process. This means that members who are sensitive to expectations of others and members who in daily life actively seek advice about culinary matters are open for information provided by the community and willing to alter their behavior as a result. Thus, H11 and H15 are supported.

We anticipated that, in the computer-mediated context of virtual communities where no one notices whether members conform to group standards and customs in real life, susceptibility to informational interpersonal influence would be stronger related to community influence than susceptibility to normative interpersonal influence (H13). This expectation, however, is invalidated. Members who are receptive to information from others and accept this as evidence about reality benefit from their community membership in terms of culinary facts and figures, i.e., their recipe knowledge increases. So, H12 is accepted. Nevertheless, this relationship is not as strong as the relationship between susceptibility to values and norms of others and community influence. It is this disposition to identify oneself with others that increases the likelihood of community influence on all phases of the cooking decision process. Thus, even without mechanisms to control behavior and punish deviations, the community exerts such influence that members who are sensitive to group norms, see it as an example of what they should know and how they should behave with respect to cooking.

In contrast, we find that the variable other-directedness, i.e., being fond of warm relationships with others, is not related to community influence on the cooking decision process. Thus, we do not find support for H10. Other hypotheses that are not supported concern the effect of members' relative culinary expertise in the offline and online context on community influence (H16 and H17). There is no significant relationship between culinary expertise and community influence on any of the phases of the cooking decision process.

Table 5.10
Regression results for the cooking decision process (III)

	Need Recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on cooking frequency	**Perceived influence on recipe knowledge**	**Perceived influence on recipe choice**	**Perceived influence on satisfaction with result**	**Average overall influence on four phases**
Orientation towards others					
Other-directedness	-0.02 (0.66)	-0.00 (0.91)	0.05 (0.22)	0.00 (0.97)	0.01 (0.79)
Susc. to norm. infl.	**0.20 (0.00)**	**0.16 (0.00)**	**0.12 (0.00)**	**0.16 (0.00)**	**0.19 (0.00)**
Susc. to info. infl.	0.07 (0.11)	**0.08 (0.04)**	0.03 (0.49)	0.03 (0.49)	0.06 (0.12)
Opinion leader	**-0.17 (0.00)**	-0.01 (0.92)	-0.10 (0.07)	**-0.18 (0.00)**	**-0.15 (0.00)**
Opinion seeker	**0.12 (0.01)**	**0.10 (0.02)**	**0.17 (0.00)**	**0.14 (0.00)**	**0.16 (0.00)**
Offline expertise	0.08 (0.08)	0.07 (0.08)	0.02 (0.70)	0.05 (0.23)	0.07 (0.11)
Online expertise	-0.04 (0.28)	-0.06 (0.11)	-0.02 (0.56)	-0.02 (0.62)	-0.04 (0.25)

The table contains standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

To conclude, we address the expected inverted U-shape relation between culinary opinion leadership and community influence. Except for community influence on the pre-purchase evaluation phase, we find that the regression models estimating merely the linear associations for opinion leadership perform better. That is why we have chosen to report these models in Table 5.10 instead of the models including the quadratic opinion leadership term. Members who consider themselves culinary opinion leaders report that their community membership has not influenced their cooking frequency. Likewise, their community membership has not increased their satisfaction with their cooking results. Possibly, they are such cooking enthusiasts that they already prepare most meals and they do this to their full satisfaction. Therefore, we do not find the expected increase, but only the expected decrease in the relationship between culinary opinion leadership and community influence on need recognition and post-purchase evaluation. For influence in the pre-purchase evaluation phase we do find an inverted U-shape relationship with culinary opinion leadership. The positive linear ($\beta = 0.40$, $p = 0.04$) and the negative quadratic ($\beta = -0.50$, $p =$

0.01) imply that a growing culinary opinion leadership relates to more influence on recipe choice, but when a certain leadership level is reached community influence on recipe choice decreases again.[10]

To summarize, the more someone is a culinary opinion leader, the less likely it is that he or she experiences community influence in the phases of need recognition and post-purchase evaluation. Culinary opinion leadership has no significant association at all with community influence in the information search phase, whereas the inverted U-shape relationship postulated in H14 is only validated for the relationship between culinary opinion leadership and community influence in the pre-purchase evaluation phase.

Internet proficiency and demographics & socioeconomic variables

Contrary to what we expected, we find no relationships between our variables relating to Internet proficiency and community influence on the cooking decision process. Hence, H18 and H19 are not supported. In comparison, we do find several interesting results with respect to demographics and socioeconomics. Lower educated members report to be more influenced by the community regarding their recipe knowledge and satisfaction with cooking results than higher educated members. We are the first to report this relationship between education and community influence that bears significance for understanding the functioning of virtual communities as reference groups. The reason why lower educated members value the virtual community as a reference group and information source could be found in the fact that it consists of ordinary people who express themselves in plain language and with whom recognizable, everyday-cooking experiences can be shared. Further exploration is needed to establish whether this explanation is indeed correct.

Furthermore, men report a higher perceived community influence on their cooking frequency than women, and younger members report a higher perceived community influence on their cooking frequency than older members. Altogether, these are noteworthy results that marketers may benefit from when planning to use SmulWeb, or other (culinary) communities for marketing purposes.

[10] The adjusted R^2 increases to 0.18 and the F-statistic improves significantly ($p < 0.01$). The standardized regression coefficients of the associations of other variables with community influence change not at all or only marginally, while their significance stays unchanged.

Table 5.10 (cont.)
Regression results for the cooking decision process (III)

	Need Recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on cooking frequency	**Perceived influence on recipe knowledge**	**Perceived influence on recipe choice**	**Perceived influence on satisfaction with result**	**Average overall influence on four phases**
Internet proficiency					
Webyears	0.01 (0.88)	-0.07 (0.06)	-0.07 (0.09)	-0.04 (0.37)	-0.05 (0.19)
Webhours	0.02 (0.65)	0.01 (0.77)	-0.02 (0.62)	-0.04 (0.31)	-0.01 (0.77)
Demographics & Socioeconomic variables					
Age	**-0.12 (0.01)**	**-0.08 (0.05)**	-0.07 (0.10)	-0.03 (0.44)	**-0.09 (0.02)**
Gender	**0.09 (0.04)**	0.05 (0.23)	0.03 (0.42)	0.03 (0.49)	0.06 (0.12)
Education	-0.06 (0.12)	**-0.19 (0.00)**	-0.06 (0.18)	**-0.08 (0.04)**	**-0.11 (0.00)**
Income	0.02 (0.65)	-0.01 (0.72)	0.05 (0.21)	0.03 (0.54)	0.03 (0.48)

The table contains standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

To conclude this paragraph, we summarize the main findings. Community influence on the cooking decision process is considerable, especially with regard to the phases of search for information and pre-purchase evaluation. The most important determinants of community influence on cooking decisions are social involvement in the community, frequency of community visits, the amount of information searched for and retrieved, and the extent to which someone is susceptible to normative interpersonal influence. Culinary opinion leadership, as well as age and education are negatively associated with community influence on cooking decisions. All considered, the functioning of the virtual community as a reference group does not differ profoundly from the process of interpersonal influence within traditional reference groups, in which it is, among other things, tie strength, interaction rate with the group, and pressure to conform to group norms that determine the degree of influence (see Chapter 3).

Nevertheless, we have to take into account that virtual communities join together (highly) topically involved individuals, many of which have considerable expertise on the community's topic of interest. Compared with traditional reference groups, virtual communities, thus, represent an enormous specialized knowledge reservoir that one may use

according to one's inclination. People actively seek advice and information from the community whenever they want. Traditional reference group influence, on the other hand, may be exerted beyond one's will. The fact that respondents who are susceptible to normative interpersonal influence report the highest degree of community influence indicates that the virtual community as a reference group is valued and taken into account, even though its influence could be easily discarded. It is clear that (some) members turn to the community as a norm-setting source of information. We may even argue that its norm-setting influence is presumably larger than that of traditional reference groups, because the community contains extended and expert information that is sought after on purpose and out of free will. The fact that it is especially the younger and less-educated members who are influenced in their consumer behavior by the community, furthermore, pinpoints the importance of virtual reference groups for particular consumer segments.

In the remainder of this chapter, we turn our attention to two other decision processes to examine whether the determinants and effects of community influence are persistent over various types of decision processes. Also, we investigate the relative importance attached to the virtual community as a reference group compared with other information sources for different decision processes. These investigations will enable us to further explore the process and impact of virtual community influence.

5.5 APPLICATION TO DECISION PROCESSES REGARDING RESTAURANT VISITING AND KITCHEN UTENSILS BUYING

We know that consumer decision-making about consumption activities varies from one situation to the next, depending on factors such as complexity of the problem-solving process and the degree of consumer involvement due to perceived risks (Blackwell et al. 2001). To capture possible differences in community influence due to decision-specific characteristics, we have applied our model also to the decision processes of visiting restaurants and buying kitchen utensils. Table 5.11 summarizes several factors that these processes differ on.

To begin with, decisions regarding cooking have to be made frequently. Whether it is considered as a complex problem varies not only per cook, but also per occasion; preparing a fancy Christmas dinner is even for the everyday cook a challenge. For most members of the community that is being studied, however, cooking is a recurring activity and therefore it probably requires routine problem solving (Kassarjian 1986). In general, financial risk is low, although performance and social risk may be high; no one wants to serve a burnt dish when the parents-in-law come over for dinner. Next, restaurant visiting usually occurs less

frequent than cooking at home. Deciding on which restaurant to visit and which menu to choose requires limited problem solving. The financial risk could be considerable. Performance and social risk are present, since the food served can be unappetizing and since restaurant visiting is a public affair (Venkatraman 1988). To conclude, consumers don't often buy kitchen utensils. Appliances such as refrigerators, microwaves, knife sets, and food processors have a long product life cycle, so usually they are bought only once or, at most, a couple of times during one's life. Most consumers are not kitchen utensils experts; therefore, the decision process requires extended problem solving (Blackwell et al. 2001). Financial investments can be very high. Besides, there is a performance risk, because the utensils might not perform as expected. Social risk also plays a role, since some utensils cannot be put out of sight and, thus, may elicit approving or disapproving inspection by house guests (Brooker 1984).

Table 5.11
Differences between decision processes

	Cooking Decision Process	Restaurant Decision Process	Kitchen utensils Decision Process
Confrontation with problem	high frequency	medium frequency	low frequency
Type of problem solving process	routine problem solving	limited problem solving	extended problem solving
Financial risk	low	medium	high

It is difficult to distinguish the three decision processes on solid criteria, because much depends on personal and situational factors. Nevertheless, from the perspective of our population of culinary enthusiasts, we could in general state that the cooking decision process has a limited degree of complexity and risk, requiring routine problem solving. The restaurant decision process scores intermediate on the degree of complexity and risk, requiring limited problem solving. Finally, buying kitchen utensils can be characterized as a decision process with a high degree of complexity and risks, requiring extended problem solving.

Interpersonal influence tends to be stronger in case of a purchase decision about complex products or luxury items, when there is little experience with the decision, and when the product or service will be publicly used or displayed. When consumers decide about buying simple products or necessities that are regularly purchased, and when their decisions concern

products that will be used in private, interpersonal influence tends to be weaker (Witt & Bruce 1972; Park & Lessig 1977; Bearden & Etzel 1982; Miniard & Cohen 1983; Rae Bachmann et al. 1992). In line with these traditional theories, we would expect that community influence on the cooking decision process is lowest and for the kitchen utensils decision process highest.

But there is more to it. Preliminary research by Martin and Lomax (2000) has shown that, overall, people have less confidence in Internet sources than in traditional information sources. Their study confirmed the predominance of traditional word-of-mouth sources particularly for higher risk purchases. This means that the influence of community membership on the consumer decision process may be smaller for kitchen utensils and restaurants (higher risk) than cooking (lower risk). Thus, in the context of virtual communication and interaction we expect interpersonal influence to be highest in decision processes with a limited degree of complexity and risk, and lowest in more complex and risky purchase situations. Hence, we hypothesize:

H20 Community influence is highest with respect to the cooking decision process, intermediate with respect to the restaurant decision process, and lowest with respect to the kitchen utensils decision process.

5.5.1 Sample and Measurement Specifics

We have not used the entire sample of respondents for the other two model applications, since it is only relevant to examine community influence on consumer decision-making regarding consumption activities, when the decision process has actually occurred within a reasonable period prior to the date the survey was issued. People eat every day, so we can assume that cooking decisions are made on a very regular basis. For the cooking decision process therefore, we have included the entire sample of respondents. For the restaurant decision process we have included only those respondents whose most recent restaurant visit took place no longer than a month prior to the date of filling out the survey. For including respondents in the kitchen utensils sample we used the threshold of six months prior to filling out the survey, in which period at least one kitchen utensil purchase should have occurred. Thus, we filtered out respondents that have not (or hardly) at all been confronted with the decision process of visiting restaurants or buying kitchen utensils and as such would corrupt true measures of community influence on these decision processes. By doing so, our samples for exploring the restaurant and kitchen utensils models were respectively decreased to 630 and 400 respondents.

We have to keep in mind that the three sample groups are not mutually exclusive. Respondents can be part of several sample groups at the same time. Nevertheless, it is interesting to examine whether there are differences between the groups in terms of sample

characteristics, because it could enhance interpretation of our regression results. The cooking sample consists of our entire sample of respondents, which we have described in Chapter 4. Appendix D contains a detailed comparison of the other two sample groups with the base sample. We find no major differences, only tendencies that shed light on the specific character of each sample group.

Compared with the cooking sample, the level of culinary interest in the other two samples is higher. Interestingly, this does not translate into a similar profile of virtual community usage. The subset of respondents in the restaurant sample makes limited use of their virtual community membership. The frequency and duration of visits in this sample group is, relatively speaking, lower than that of the other groups. Moreover, mean scores of retrieving, supplying and discussing information in the community are lowest. The kitchen utensils sample, on the other hand, can be characterized as consisting of dedicated members. We find a relatively high percentage of longtime members and highest scores for social involvement as well as retrieving, supplying, and discussing information. This group also contains, relatively speaking, quite some members who have a lot of Internet experience both in terms of years of Internet usage and the number of hours they are online per week. Overall, the kitchen utensils sample group tends to be somewhat younger than the base group. Both the restaurant and the kitchen utensils sample group have a larger percentage of higher educated members and members in the higher income categories compared with the cooking sample.

Table 5.12 describes the measurements for community influence on the restaurant and kitchen utensils decision processes. The constructs are identical to the constructs that measure community influence on the cooking process, but have been adapted to fit their specific context. The ratings of the resulting multi-item scales are aggregated and the mean is used for further analysis.

Table 5.12
Measurements for community influence on the restaurant and kitchen utensils decision processes

Community influence on the restaurant decision process	
Perceived influence on restaurant visit frequency	Because of my SmulWeb-membership, I go to restaurants more frequently. [a]
Perceived influence on restaurant knowledge	Extent of influence on knowledge about: [b] (a) Price classes of restaurants (b) Quality of restaurants (c) Originality of restaurants (d) Service in restaurants
Perceived influence on restaurant choice	Because of my SmulWeb-membership, I visit other types of restaurants. [a]
Perceived influence on satisfaction with visit	Because of my SmulWeb-membership, I am more satisfied with my restaurant choices. [a]
Community influence on the kitchen utensils decision process	
Perceived influence on kitchen utensils purchase	Because of my SmulWeb-membership, I purchase kitchen utensils more frequently. [a]
Perceived influence on kitchen utensils knowledge	Extent of influence on knowledge about: [b] (a) Prices of kitchen utensils (b) Quality of kitchen utensils (c) User-friendliness of kitchen utensils (d) Manuals of kitchen utensils
Perceived influence on kitchen utensils choice	Because of my SmulWeb-membership, I buy other types of kitchen utensils. [a]
Perceived influence on satisfaction with purchases	Because of my SmulWeb-membership, I am more satisfied with my kitchen utensils purchase choices. [a]

[a] Statement (5-point rating scale: 1=strongly disagree / 5 = strongly agree).
[b] Evaluation (5-point rating scale: 1 = no influence / 5 = a lot of influence).

5.5.2 Comparing Community Influence on the Three Decision Processes

Table 5.13 gives an overview of the mean scores of community influence on the three decision processes. In line with H20, we find that scores are highest for all phases of the cooking decision process, whereas scores are lowest for all phases of the kitchen utensils decision process. Sign-tests indicate that community influence on the cooking decision process is significantly ($p < 0.01$) higher than community influence on the other two decision processes for all phases of the decision process. Community influence on the kitchen utensils decision process is significantly ($p \leq 0.05$) lowest for the phases of search for information, pre-purchase evaluation, and post-purchase evaluation. There is no significant difference

between community influence on need recognition with respect to the restaurant and kitchen utensils decision processes.[11] Thus, we find support for our contention that online interpersonal influence is highest in the decision process that is characterized by a limited degree of complexity and risk, i.e., the cooking decision process, whereas we find partial support for our contention that community influence is lowest in more complex and risky decision situations.

Table 5.13
Community influence on the three different decision processes

	Need recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on frequency	**Perceived influence on knowledge**	**Perceived influence on choice**	**Perceived influence on satisfaction**	**Average overall influence**
Cooking	2.3	3.2	3.1	2.8	2.9
N = 1007	(1.4)	(1.1)	(1.4)	(1.4)	(1.1)
Restaurants	1.4	2.4	1.6	1.6	1.7
N = 630	(0.8)	(1.3)	(1.0)	(1.0)	(0.9)
Kitch. utens.	1.4	2.1	1.5	1.5	1.6
N = 400	(0.8)	(1.2)	(0.9)	(0.9)	(0.8)

Scores are measured on 5-point rating scales (1-5). Standard deviations are annotated in parentheses.

Besides scrutinizing differences in community influence between the decision processes, we can also examine differences per phase of each decision process. By doing so, we find for the restaurant and kitchen utensils decision processes that the mean scores of community influence on the information search phase are significantly ($p < 0.01$) higher compared with the other phases of the consumer decision process. For the cooking decision process we found that community influence on search for information is significantly higher than community influence on the other phases, except for the pre-purchase evaluation phase. Thus, while H1 was partially supported for the cooking decision process, it is unequivocally supported for the other two decision processes. Community influence on the consumer decision process is most profound in the information search phase, especially with respect to more complex and risky decision processes.

Now that our findings indicate that community influence differs among decision processes, it is interesting to examine the relative importance attached to the community as a

[11] To test for significant differences, we use the mean scores of 277 respondents who are part of all three samples.

source of information compared with other sources of information for the three decision processes under study. After all, community influence may be highest for cooking decisions, but how does this compare with the value attached to other sources of recipe information? Community influence could be very trivial compared with sources such as family and friends or the media. In order to investigate this we asked our respondents to indicate on a 5-point rating scale how much value (1= no value / 5 = a lot of value) they attach to various sources of information for each decision process. Table 5.14 lists the results.

Table 5.14
Relative importance attached to various information sources for decision-making

	Cooking Decision Process	Restaurant Decision Process	Kitchen utensils Decision Process
SmulWeb	4.4 (0.8)	3.3 (1.9)	2.9 (1.3)
Family / Friends	4.0 (1.1)	4.3 (1.0)	3.8 (1.2)
Cookbooks / Rest. Guides / Brochures	4.4 (0.8)	2.9 (1.3)	3.1 (1.3)
Magazines / Papers	4.0 (1.0)	3.3 (1.2)	3.5 (1.2)
Television / Radio	3.2 (1.3)	2.7 (1.2)	3.0 (1.3)
Internet sources (other than SW)	3.5 (1.2)	2.8 (1.3)	2.9 (1.3)

Scores are measured on 5-point rating scales (1-5). Standard deviations are annotated in parentheses.

Findings indicate that SmulWeb is valued highly as an information source for cooking decisions. Together with cookbooks, it takes the first place among the listed sources as most important source of recipe information. Thus, respondents do not only report high community influence on cooking decisions, but they also consider the community a significantly ($p < 0.01$) more important information source than traditional reference groups such as family and friends, as well as the media. In contrast, for information about restaurants and kitchen utensils respondents first turn to their family and friends. This finding confirms Martin and Lomax's preliminary research results that indicated that consumers attach more importance to traditional word-of-mouth sources than Internet sources for higher risk purchases (Martin & Lomax 2000). Nevertheless, we find that SmulWeb is valued second-best after family and friends as a source of restaurant information. Respondents attach significantly ($p < 0.01$) more importance to SmulWeb as a source of restaurant

information than to restaurant guides, the broadcast media and the Internet. For kitchen utensils information, SmulWeb is ranked least important, together with the broadcast media and the Internet. It seems that for this highly complex and involved decision process the virtual community still has to proof its informational value over traditional sources.

We now turn to the discussion of the determinants of community influence on the decision processes regarding restaurant visits and kitchen utensils purchases. Again, for ease of use, we have divided the results from the total regression models into separate tables that correspond with the three blocks of independent variables. Note that the values reported in these tables are results from an estimation of the complete models including all independent variables. Appendix B contains for both models a table with the results listed together. The R^2 of the restaurant decision process model varies from 0.18 (adjusted R^2 = 0.13 / F statistic = 3.83) for community influence on restaurant choice, to 0.25 (adjusted R^2 = 0.21 / F statistic = 5.92) for community influence on restaurant knowledge. The R^2 of the kitchen utensils decision process model varies from 0.19 (adjusted R^2 = 0.11 / F statistic = 2.50) for community influence on kitchen utensils purchase frequency, to 0.25 (adjusted R^2 = 0.18 / F statistic = 3.64) for community influence on satisfaction with kitchen utensils purchases.

5.5.3 Comparing Results: Membership Characteristics

Topical and social involvement

Contrary to what we expected, we find that topical involvement is not significantly associated with community influence on consumer decision-making, neither in the context of the cooking decision process, nor in the context of the other two decision processes (Table 5.15 and 5.16). Social involvement, on the other hand, is strongly associated with community influence on all phases of the cooking decision process. For the restaurant and kitchen utensils decision processes, we only find a significant relationship between social involvement and community influence in the post-purchase evaluation phase. Thus, when members are confronted with a decision about restaurant visiting or kitchen utensils buying, they are likely to experience community influence on their satisfaction level with the decision outcome in case they are socially involved in the community. That is, presumably, because members can share their experiences with other members after they have visited a restaurant or bought a kitchen utensil.

Table 5.15
Regression results for the restaurant decision process (I)

	Need recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on rest. visit frequency	**Perceived influence on restaurant knowledge**	**Perceived influence on restaurant choice**	**Perceived influence on satisfaction with visit**	**Average overall influence on four phases**
Membership characteristics					
Topical involvement	0.09 (0.17)	0.07 (0.27)	0.06 (0.42)	0.03 (0.64)	0.08 (0.24)
Social involvement	0.10 (0.19)	0.12 (0.11)	0.10 (0.22)	**0.21 (0.01)**	**0.16 (0.03)**
Length of membership	-0.04 (0.39)	-0.03 (0.56)	-0.03 (0.61)	-0.09 (0.09)	-0.06 (0.26)

The table contains standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

Table 5.16
Regression results for the kitchen utensils decision process (I)

	Need recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on kitch. uten. purchase frequency	**Perceived influence on kitchen utensils knowledge**	**Perceived influence on kitchen utensils choice**	**Perceived influence on satisfaction with purchase**	**Average overall influence on four phases**
Membership characteristics					
Topical involvement	0.05 (0.55)	-0.08 (0.33)	-0.15 (0.08)	-0.07 (0.37)	-0.08 (0.30)
Social involvement	0.02 (0.82)	0.10 (0.29)	0.18 (0.07)	**0.21 (0.03)**	0.16 (0.08)
Length of membership	-0.13 (0.07)	-0.01 (0.83)	-0.09 (0.18)	**-0.21 (0.00)**	**-0.13 (0.05)**

The table contains standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

Membership length

In line with the results regarding the cooking decision process, we find no evidence for an inverted U-shape relationship between membership length and community influence on the

restaurant and kitchen utensils decision processes.[12] Instead, we find that membership length has a significant linear association with community influence in the post-purchase evaluation phase of kitchen utensils purchase decisions. Contrary to what we expected, the longer someone has been a member, the less influence is experienced. There is one exception in which the regression model including a quadratic membership length association outperforms the model estimating only linear associations, namely for the relationship between membership length and community influence on the information search phase in the context of kitchen utensils decision-making. In this case, we find an improved model fit with significant linear and quadratic associations.[13] However, the relationship represents an U-shape function with a negative linear (β = -0.77, p = 0.02) and a positive quadratic (β = 0.78, p = 0.02).

Thus, members report that they experience community influence on their kitchen utensils knowledge in the first months of their membership, then influence diminishes, while in later stages it increases again. An explanation could be that in the early phase of community membership the site is explored by surfing across a broad range of community pages including those that contain information about kitchen utensils. Once members have become more regular visitors, it is likely that their visits focus on the community's main topic of interest, i.e., recipe exchange, or energy is put into building social relationships, shifting attention away from the more secluded kitchen utensils reviews. It could also be that an upcoming kitchen utensils purchase decision has stimulated some respondents to join the community so they can benefit from the knowledge and experiences of others while going through the decision process. Since kitchen utensils purchases are not likely to occur on a daily basis, it will then take some time before kitchen utensils information is sought after again. Community influence on members' kitchen utensils knowledge in later phases of the community membership life cycle can be explained by an increased and widened interest in culinary matters due to community membership. Overtime, members might become real cook fanatics, therefore increasing the likelihood that they invest in new kitchen appliances and use the community as an information source to assist in their purchase decision.

However, since we do not find any significant associations between membership length and community influence on the restaurant decision process and taken the opposing relationships between membership length and community influence on cooking and kitchen

[12] The models estimating a linear and quadratic association between membership length and community influence on the restaurant and kitchen utensils decision processes did not outperform the models in which only a linear association was estimated. Consequently, we report results from the linear regression models only.

[13] The adjusted R^2 increases to 0.19 and the F-statistic improves significantly ($p < 0.05$). The beta-values of the associations of other variables with community influence change only marginally, while their significance stays unchanged.

utensils purchase decisions, we conclude that membership length plays an ambiguous role in explaining community influence and that it requires further research.

5.5.4 Comparing Results: Community Interaction Characteristics

Frequency and duration of visits

In the cooking sample, we have seen that frequency of visits increases community influence on all phases of the decision process. For restaurants and kitchen utensils we do not find this relationship (Tables 5.17 and 5.18). The reason could be that decisions about recipes have to be made on a more regular basis than decisions about restaurants and kitchen utensils. It is beneficial to visit the community more frequently to get new recipes, whereas the need to increase visit frequency to update and exchange restaurant and kitchen utensils knowledge is less present. Spending more time in the community during each visit does also not cause more community influence on restaurant or kitchen utensils decisions. We even find a negative relationship between duration of visits and community influence on restaurant knowledge. Presumably, long visits are not necessarily used for extensive goal-directed information retrieving, supplying, or discussing, but for engaging in recreational behavior, such as writing guest book messages or illustrating one's homepage.

Table 5.17
Regression results for the restaurant decision process (II)

	Need Recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on rest. visit frequency	**Perceived influence on restaurant knowledge**	**Perceived influence on restaurant choice**	**Perceived influence on satisfaction with visit**	**Average overall influence on four phases**
Community interaction characteristics					
Frequency of visits	-0.04 (0.47)	0.06 (0.36)	0.03 (0.60)	-0.06 (0.36)	0.00 (0.97)
Duration of visits	-0.04 (0.45)	**-0.15 (0.01)**	-0.05 (0.41)	-0.08 (0.16)	-0.10 (0.06)
Retrieve information	**0.12 (0.04)**	**0.25 (0.00)**	**0.23 (0.00)**	**0.23 (0.00)**	**0.26 (0.00)**
Supply information	0.12 (0.09)	0.11 (0.13)	0.02 (0.84)	0.02 (0.79)	0.08 (0.28)
Discuss information	0.08 (0.19)	-0.08 (0.20)	-0.02 (0.80)	-0.04 (0.57)	-0.02 (0.69)

The table contains standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

Retrieve, supply, and discuss information

In line with results regarding the cooking decision process, we find that retrieving information from the community is an important determinant of community influence on restaurant and kitchen utensils decisions, whereas supplying and discussing information have no direct effect at all. For each phase of the restaurant and kitchen utensils decision process we find a positive relationship between information retrieval and community influence. Thus, members do not only use their membership for collecting recipes, but their information retrieval also gets them enthusiastic about restaurant visiting and kitchen utensils buying, it increases their knowledge about these consumption activities, it develops their preferences, and, as a result, they become more satisfied with the outcome of subsequent visit or purchase decisions.

Table 5.18
Regression results for the kitchen utensils decision process (II)

	Need Recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on kitch. uten. purchase frequency	**Perceived influence on kitchen utensils knowledge**	**Perceived influence on kitchen utensils choice**	**Perceived influence on satisfaction with purchase**	**Average overall influence on four phases**
Community interaction characteristics					
Frequency of visits	0.11 (0.17)	-0.02 (0.84)	-0.02 (0.82)	-0.03 (0.74)	0.01 (0.88)
Duration of visits	-0.14 (0.07)	-0.04 (0.62)	-0.03 (0.66)	0.05 (0.52)	-0.05 (0.50)
Retrieve information	**0.16 (0.03)**	**0.26 (0.00)**	**0.27 (0.00)**	**0.21 (0.01)**	**0.29 (0.00)**
Supply information	0.09 (0.34)	-0.11 (0.23)	-0.14 (0.16)	-0.16 (0.08)	-0.11 (0.23)
Discuss information	0.00 (0.97)	-0.01 (0.89)	0.02 (0.85)	0.05 (0.50)	0.02 (0.82)

Both tables contain standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

Table 5.19
Regression results for the restaurant decision process (III)

	Need recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on rest. visit frequency	**Perceived influence on restaurant knowledge**	**Perceived influence on restaurant choice**	**Perceived influence on satisfaction with visit**	**Average overall influence on four phases**
Orientation towards others					
Other-directedness	**-0.11 (0.03)**	0.03 (0.48)	**-0.10 (0.05)**	-0.04 (0.45)	-0.06 (0.23)
Susc. to norm. infl.	**0.17 (0.00)**	0.09 (0.06)	**0.14 (0.01)**	**0.16 (0.00)**	**0.17 (0.00)**
Susc. to info. infl.	-0.03 (0.61)	0.00 (0.98)	0.05 (0.35)	-0.05 (0.40)	-0.00 (0.94)
Opinion leader	-0.02 (0.73)	**0.14 (0.03)**	-0.06 (0.41)	-0.03 (0.69)	0.02 (0.78)
Opinion seeker	0.08 (0.16)	0.06 (0.24)	0.07 (0.24)	**0.12 (0.02)**	0.10 (0.06)
Offline expertise	0.03 (0.60)	-0.07 (0.20)	0.07 (0.27)	0.02 (0.73)	0.01 (0.88)
Online expertise	0.10 (0.06)	-0.01 (0.80)	0.04 (0.48)	**0.12 (0.03)**	0.07 (0.19)
Internet proficiency					
Webyears	0.09 (0.07)	0.07 (0.18)	0.09 (0.08)	0.03 (0.53)	0.09 (0.08)
Webhours	-0.02 (0.74)	0.03 (0.49)	0.00 (0.98)	0.04 (0.47)	0.02 (0.69)
Demographics & Socioeconomic variables					
Age	-0.01 (0.82)	0.07 (0.18)	0.05 (0.36)	0.06 (0.29)	0.06 (0.29)
Gender	**0.10 (0.05)**	0.02 (0.67)	0.05 (0.32)	0.09 (0.08)	0.08 (0.13)
Education	-0.05 (0.36)	-0.08 (0.11)	-0.03 (0.59)	0.01 (0.93)	-0.05 (0.34)
Income	-0.03 (0.53)	-0.03 (0.54)	0.01 (0.80)	-0.04 (0.47)	-0.03 (0.60)

The table contains standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

Table 5.20
Regression results for the kitchen utensils decision process (III)

	Need recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on kitch. uten. purchase frequency	**Perceived influence on kitchen utensils knowledge**	**Perceived influence on kitchen utensils choice**	**Perceived influence on satisfaction with purchase**	**Average overall influence on four phases**
Orientation towards others					
Other-directedness	0.03 (0.68)	0.03 (0.63)	0.06 (0.41)	0.06 (0.35)	0.06 (0.39)
Susc. to norm. infl.	**0.23 (0.00)**	**0.16 (0.02)**	**0.21 (0.00)**	**0.16 (0.01)**	**0.24 (0.00)**
Susc. to info. infl.	0.07 (0.33)	0.06 (0.43)	0.08 (0.31)	0.08 (0.28)	0.09 (0.21)
Opinion leader	-0.04 (0.66)	**0.24 (0.01)**	0.08 (0.37)	0.10 (0.23)	0.13 (0.11)
Opinion seeker	-0.10 (0.16)	0.02 (0.80)	-0.09 (0.18)	0.00 (0.96)	-0.05 (0.46)
Offline expertise	-0.01 (0.88)	-0.03 (0.71)	-0.01 (0.86)	-0.01 (0.90)	-0.02 (0.78)
Online expertise	0.06 (0.40)	0.03 (0.68)	0.07 (0.34)	0.11 (0.10)	0.08 (0.22)
Internet proficiency					
Webyears	0.01 (0.88)	-0.01 (0.93)	-0.02 (0.80)	0.04 (0.57)	0.01 (0.92)
Webhours	0.06 (0.37)	0.04 (0.52)	0.09 (0.18)	0.06 (0.30)	0.08 (0.21)
Demographics & Socioeconomic variables					
Age	-0.03 (0.74)	0.09 (0.23)	0.07 (0.37)	0.11 (0.14)	0.08 (0.27)
Gender	-0.00 (0.96)	-0.01 (0.86)	-0.02 (0.75)	0.01 (0.91)	-0.01 (0.88)
Education	-0.07 (0.31)	**-0.17 (0.01)**	-0.07 (0.32)	-0.09 (0.17)	**-0.13 (0.04)**
Income	0.07 (0.33)	**-0.13 (0.04)**	0.09 (0.20)	0.03 (0.64)	0.00 (0.95)

The table contains standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

5.5.5 Comparing Results: General Consumer Characteristics

Orientation towards others

Finally, we discuss the associations between general consumer characteristics and community influence on the restaurant and kitchen utensils decision process. Results are summarized in Tables 5.19 and 5.20. A consistent finding for the cooking, restaurant, and kitchen utensils decision process is the positive relationship between susceptibility to normative interpersonal influence and community influence on all phases of the three decision processes. Members who, in general, conform to the expectations of others and who desire to identify themselves with people around them, experience more community influence than members who are not susceptible to the opinions and behavior of others. Susceptibility to informational interpersonal influence, i.e. the tendency to accept information from others as evidence about reality, is not significantly related to community influence on knowledge about restaurants and kitchen utensils.

In contrast to the cooking decision process, culinary opinion seeking behavior is not strongly associated with community influence on the restaurant and kitchen utensils decision process. While we find a positive relationship between culinary opinion seeking behavior and community influence on all phases of the cooking decision process, in the context of the other two decision processes we only find this positive relationship for community influence on satisfaction with restaurant visits. For culinary opinion leadership we, again, find no support for an inverted U-shape relationship. The models estimating only the linear association of opinion leadership perform better and therefore we have reported results of these models instead of the ones also including a quadratic term. We find that culinary opinion leadership is positively related to community influence on restaurant and kitchen utensils knowledge. Presumably, culinary experts seize the opportunity to benefit from the knowledge of other experts in the community beyond the mere exchange of recipe information.

A final noteworthy result regarding members' orientation towards others is the fact that members who consider themselves to be more culinary knowledgeable than other members report a high degree of community influence on their satisfaction with restaurant visits. This finding can be explained knowing that an enthusiastic and dedicated group of restaurant reviewers is active in the community. An interview with one of them revealed that indeed they have a high opinion about themselves with respect to their approach to culinary matters compared with the bulk of other members. Sharing this notion of expertise might increase the fun and meaning of restaurant visits to them and consequently increases satisfaction with restaurant visits. In the same line we might explain that satisfaction with restaurant visits is increased for those who actively seek the opinion of others with respect to culinary matters. Probably, this is again due to the lively exchange of restaurant reviews within the

community. For the rest, the level culinary expertise relative to others both online and offline is not related to community influence on decisions about restaurant visits and kitchen utensils purchases.

Internet proficiency and demographics & socioeconomic variables

Overall, results for this block of general consumer characteristics are not very different from the cooking decision process. Internet proficiency is not related to community influence on the restaurant and kitchen utensils decision process. Though we would expect that more Internet experience leads to an enhanced usage of, and a greater trust in, the virtual community as an aid in making purchase or consumption decisions, especially with regard to decision processes that are more complex and characterized by a higher degree of involvement, this is not the case. We finish this paragraph by pointing to the consistent relationship between education and community influence on knowledge. Lower educated members report more community influence on both their recipe as well as their kitchen utensils knowledge compared with higher educated members. The relationship between education and community influence on restaurant knowledge is in the same direction, though not significant. This finding strengthens the notion that especially for the lower-educated consumer segment virtual communities take up a valuable place as influential reference groups.

Before we turn to the general discussion and conclusion of this chapter, we summarize the main findings of this paragraph addressing community influence on two alternative decision processes. Compared with community influence on the cooking decision process, community influence on decisions regarding restaurant visiting and kitchen utensils buying is different. Not only do we find a smaller effect of community influence, mainly limited to the information search phase, we also find that community influence on restaurant and kitchen utensils decisions is primarily associated with the amount of information retrieved and the degree of members' susceptibility to normative interpersonal influence. Thus, variables that explained community influence on cooking decisions, such as social involvement and frequency of visits, do not play a role in the context of restaurant and kitchen utensils decisions. We will further elaborate on these findings in the final concluding paragraph. We may conclude that community influence on the restaurant and kitchen decision processes is most likely to occur in case members actively seek information about these consumption experiences and when they, in general, are sensitive to group norms and expectations of others.

5.6 DISCUSSION AND CONCLUSION

In this chapter we have studied virtual community influence on the consumer decision process as a function of membership characteristics, community interaction characteristics, and general consumer characteristics. We have focused on four phases of the consumer decision process that are most relevant in the context of interaction and interpersonal influence between virtual community members, i.e., need recognition, search for information, pre-purchase evaluation, and post-purchase evaluation. We have applied our framework to consumption or purchase decisions related to cooking, restaurant visiting, and kitchen utensils buying. Our goal was to gain insight in the determinants of virtual community influence and in the possible differential effects of community influence on various stages of the consumer decision process. By applying our framework to three diverse decision processes, we have obtained a richer understanding of the conditions under which community influence occurs in varying consumption or purchase situations.

Table 5.21 lists our hypotheses, the predicted signs, and the findings for the three consumer decision processes. We indicate whether the hypothesis is supported (S), not supported (NS) or partially supported (PS). The latter being the case when we find an association between a variable and community influence on only one or a few of the phases of the consumer decision process and not, as indirectly hypothesized, for all four phases. In Table 5.22 we have summarized the factors that are positively or negatively related to community influence on each phase of the three consumer decision processes. This table facilitates a comparison of influencing factors between the different phases, as well as between the different decision processes.

5.6.1 Community Influence on Cooking Decisions

If we focus on the findings regarding community influence on the cooking decision process, we may conclude that virtual interpersonal influence does not profoundly differ from interpersonal influence in traditional face-to-face settings. In both cases, an important determinant of interpersonal influence is the social tie to the reference group. The more someone is socially involved in the virtual community, the more likely it is that community influence occurs. Likewise, we find that the frequency of visits to the community increases the likelihood that virtual interpersonal influence is experienced. This reflects the functioning of traditional reference groups, for which is shown that the regularity with which people find themselves in the sphere of influence of the group enhances its impact on their knowledge, attitudes, and behavior. But, whereas participation in reference groups such as a personal circle of family and friends, or a professional, religious, or neighborhood community cannot easily be avoided, participation in the virtual community is chosen by own volition.

Table 5.21
Overview of the hypotheses findings

Hypotheses and predicted signs			*Findings*		
			Cooking	*Restaurants*	*Kitchen utensils*
Virtual Community Influence					
VCI on SFI stronger than on other phases	(H1)	>	PS	S	S
VCI strongest for cooking decisions, medium for restaurant decisions, and lowest for k.u. decisions	(H20)	>	S	S	S
Membership Characteristics					
Topical involvement and VCI on CDP	(H2)	+	NS	NS	NS
Social involvement and VCI on CDP	(H3)	+	S	PS	PS
Membership length and VCI on CDP	(H4)	∩	NS	NS	NS
Community Interaction Characteristics					
Frequency of visits and VCI on CDP	(H5)	+	S	NS	NS
Duration of visits and VCI on CDP	(H6)	+	NS	NS	NS
Retrieve information and VCI on CDP	(H7)	+	S	S	S
Supply information and VCI on POST	(H8)	+	NS	NS	NS
Discuss information and VCI on CDP	(H9)	+	NS	NS	NS
General Consumer Characteristics					
Other-directedness and VCI on CDP	(H10)	+	NS	NS	NS
Susceptibility to normative influence and VCI on CDP	(H11)	+	S	PS	S
Susceptibility to informational influence and VCI on SFI	(H12)	+	S	NS	NS
INFO.INF and VCI on CDP stronger than NORM.INF	(H13)	>	NS	NS	NS
Opinion leader and VCI on CDP	(H14)	∩	NS	NS	NS
Opinion seeker and VCI on CDP	(H15)	+	S	PS	NS
Offline expertise and VCI on CDP	(H16)	+	NS	NS	NS
Online expertise and VCI on CDP	(H17)	–	NS	NS	NS
Years Internet usage and VCI on CDP	(H18)	+	NS	NS	NS
Hours weekly online and VCI on CDP	(H19)	+	NS	NS	NS

VCI = Virtual Community Influence; CDP = Consumer Decision Process; NR = Need Recognition; SFI = Search For Information; PRE = Pre-Purchase Evaluation; POST = Post-Purchase Evaluation; INFO.INF = Susceptibility to Informational Influence; NORM.INF = Susceptibility to Normative Influence; S = Supported; NS = Not Supported; PS = Partially Supported.

Table 5.22
The determinants of community influence per phase of each decision process

Community influence on ***need recognition →***	*Cooking frequency*	*Restaurant visit frequency*	*K.u. purchase frequency*
Social involvement	+		
Frequency of visits	+ +		
Retrieve information		+	+
Other-directedness		–	
Susc. to normative influence	+ +	+ +	+ +
Opinion leader	– –		
Opinion seeker	+ +		
Age	– –		
Gender (male vs. female)	+	+	
Community influence on ***search for information →***	*Recipe knowledge*	*Restaurant knowledge*	*Kitchen utensils knowledge*
Social involvement	+ +		
Length of membership	+ +		
Frequency of visits	+ +		
Duration of visits		– –	
Retrieve information	+ +	+ +	+ +
Discuss information	–		
Susc. to normative influence	+ +		+
Susc. to informational infl.	+		
Opinion leader		+	+ +
Opinion seeker	+		
Age	–		
Education	– –		– –
Income			–
Community influence on ***pre-purchase evaluation →***	*Recipe choice*	*Restaurant choice*	*Kitchen utensils choice*
Social involvement	+		
Frequency of visits	+ +		
Retrieve information	+ +	+ +	+ +
Other-directedness		–	
Susc. to normative influence	+ +	+ +	+ +
Opinion seeker	+ +		

+ + / + positively significant at .01/.05 level (2-tailed).
– – / – negatively significant at .01/.05 level (2-tailed).

Table 5.22 (cont.)
The determinants of community influence per phase of each decision process

Community influence on ***post-purchase evaluation →***	*Satisfaction with cooking result*	*Satisfaction with restaurant visit*	*Satisfaction with k.u. purchase*
Social involvement	+ +	+ +	+
Length of membership	+ +		– –
Frequency of visits	+ +		
Retrieve information	+	+ +	+ +
Susc. to normative influence	+ +	+ +	+ +
Opinion leader	– –		
Opinion seeker	+ +	+	
Online expertise		+	
Education	–		
Overall *community influence →*	*Cooking decision process*	*Restaurant decision process*	*Kitchen utensils decision process*
Social involvement	+ +	+	
Length of membership			–
Frequency of visits	+ +		
Retrieve information	+ +	+ +	+ +
Susc. to normative influence	+ +	+ +	+ +
Opinion leader	– –		
Opinion seeker	+ +		
Age	–		
Education	– –		–

+ + / + positively significant at .01/.05 level (2-tailed).
– – / – negatively significant at .01/.05 level (2-tailed).

There are numerous virtual communities to choose from. And, once decided for a particular one, members can make up their own mind about when they visit, how often they visit, what they do during their visits, with whom they communicate, and whether they become active networkers or passive bystanders. Virtual community membership seems free from many restraints associated with traditional reference groups, whose sphere of influence can be rather normative and enforcing. After all, in the often times anonymous context of online interaction no one knows who you really are and how you actually think and behave. Therefore it is surprising that we find a strong positive relationship between susceptibility to normative interpersonal influence and virtual community influence on decision-making. This means that members who are sensitive to the expectations of others, report more community influence than members who do not care about group norms. Thus, although the virtual community has no reward and punishment mechanism for actual behavior displayed in real life, still many members voluntarily take the information provided by the community into account and are willing to alter their behavior as a result. This underscores the potential power of the virtual community as a reference group.

Besides social involvement, frequency of visits, and susceptibility to normative interpersonal influence, several other factors are important as determinants of community influence on the cooking decision process. In general, culinary opinion leaders are less likely to experience community influence, whereas culinary opinion seekers report profound levels of community influence. Also, the extent to which members retrieve information from the community is in general positively related to community influence. Although these findings are not really surprising, they do underscore that virtual communities are actively used, valued, and taken into account as information sources for consumer decision-making. Our results even indicate that for cooking decisions the virtual community under study is more valued as an information source than traditional reference groups such as family and friends, as well as the media.

This finding has important implications. Marketing managers should really start to rethink any half-hearted attitude towards online communities and recognize their influencing capacity. Different from traditional reference groups, virtual communities can be easily monitored on a constant and unobtrusive basis. Thus, offering marketers the opportunity to grasp the ongoing interpersonal influence, and, even to direct it to some degree. After all, companies may feed the community with background information or participate in discussion forums. Compared with expensive marketing campaigns conducted through traditional media, supporting online consumer-to-consumer interactions, as a tool to spread the word about one's company and to communicate messages, is definitely a cheaper and apparently also a more effective alternative.

What do marketers have to keep in mind when turning to virtual communities as marketing tools? We already mentioned the importance of social involvement and frequency of visits as factors that are strongly related to community influence. Thus, community managers should invest in functionalities that facilitate member contact, they should safeguard a social atmosphere, and they should organize the community in such a way that regular visits are attractive and beneficial. These directions are not new (e.g., Hagel & Armstrong 1997; Kim 2000; McWilliam 2000; Brown et al. 2002), but up to date no research has actually shown the relationship between social involvement and regular visits on the one hand and community influence on consumer behavior on the other. Our research also brings to light that factors that are generally considered important for developing and maintaining a thriving community, i.e., increasing membership length, duration of visits, active supply of information, and participation in discussion forums, have no relationship with community influence on consumer decision-making. This is not to say that community managers should disregard these factors, because that could indeed jeopardize the sustainability of the community as an online meeting platform. However, when marketers want to use the community for marketing purposes they should focus on other factors instead.

In this respect, by comparing which factors have the strongest relationship with community influence per phase of the cooking decision process, our research offers valuable insight into which factors are important when one wants to use the virtual community to affect specific phases of consumer decision-making.[14] We find that susceptibility to normative interpersonal influence is most strongly associated with community influence on need recognition. Community influence in the information search phase is best explained by the extent to which members retrieve information from the community. The variable that is especially strongly related to community influence in the phases of pre- and post-purchase evaluation is frequency of visits. For marketers, this means, for example, that when they want to increase consumer knowledge through the community they should facilitate the localization and retrieval of information. Instead, when the goal is to change consumer choices and preferences through the community, they should try to increase the number of visits per member.

Overall, we find that virtual community influence on the consumer decision process is most profound in the information search phase, followed by influence in the pre-purchase evaluation phase. Most members benefit from the extensive knowledge reservoir to broaden, update, and refine their culinary expertise, which is reflected by increased knowledge and altered choice regarding culinary consumption experiences. To a lesser extent, the community has influence on post-purchase evaluations. Hence, the community's role in reducing cognitive dissonance after a purchase or consumption experience is limited. Influence on need recognition is least profound. Members are not very likely to increase the frequency with which they engage in consumption activities due to their community membership.

5.6.2 Community Influence on Restaurant and Kitchen Utensils Decisions

The application of our research model to three decision processes has made clear that community influence indeed differs depending on the decision process at stake. To begin with, restaurant and kitchen utensils decisions are less affected by community membership compared with cooking decisions. The community plays a role in the information search phase, but its impact on the other phases of the restaurant visiting and kitchen utensils buying decision process is limited. This could mean that for these more complicated decision processes consumers rely on other types of information sources. Indeed, the comparison of value attached to various information sources has brought to light that the respondents turn in the first place to their family and friends for information about restaurants and kitchen utensils. Respondents may find these other sources trustworthier than the virtual community

[14] These findings are based on a comparison of the beta-weights (see Tables 5.8, 5.9, and 5.10).

when they need advice for higher risk purchases (cf., Martin and Lomax 2000). The explanation might also be much simpler: it could be a matter of focus and layout.

The influence of community membership on cooking decisions is not only associated with the level of factual information retrieved from the community, but also from the support received and fun shared with likeminded members, i.e., the social embeddedness in the community. In contrast to the cooking decision process, social involvement is hardly associated with community influence on the restaurant visiting and kitchen utensils buying decision process. Instead, it is especially the extent to which members retrieve information from the community that has a positive relationship with community influence on restaurant and kitchen utensils decisions. Similarly, frequency of visits is also not related to community influence on restaurant and kitchen utensils decisions, whereas regular visits substantially increase community influence on the cooking decision process. Altogether, this might indicate that community advice is sought after, ad hoc and goal-directed, for restaurant and kitchen utensils decisions. Alternatively, influence on cooking decisions is almost inevitable experienced every time the community is visited, even if it is only to socially interact with others, because of the abundance and overall presence of recipe information.

Taken this finding into account, the management of the community under study has turned its attention to the sections containing other culinary information than recipes. They have tried to improve visibility by regularly featuring restaurant reviews and product tips on the community home page and by specifically inviting members to submit their evaluations and experiences with regard to food products, restaurants, and kitchen utensils. Because information about these other culinary topics today forms a larger and integral part of the community's main themes propagated on the home page, members have started to take more and more notice, and the number of restaurant and kitchen utensils reviews has increased proportionally. Presumably, this will also result in more community influence on consumer decision-making about restaurant visiting and kitchen utensils buying.

A final difference between community influence on the cooking decision process versus the other two decision processes concerns the effect of culinary opinion leadership. Whereas culinary opinion leadership is negatively related to community influence on several phases of the cooking decision process, we find a positive relationship between culinary opinion leadership and community influence on knowledge about restaurants and kitchen utensils. This points to a differential usage of the community as a source of information based on members' previous knowledge and level of expertise. Experts do not use the community for recipe information, but focus on other culinary information instead. Because expert members are presumed to be active contributors of information, sharing and/or showing off their expertise (e.g., Venkatraman 1990), and because their contributions are important for the breadth and depth of the community's knowledge reservoir (e.g., Kozinets 1999), it is

imperative that the community also has something to offer them in return to secure their continuing involvement. Our research indicates that expert members find value in extensions to the community's topic of interest, rather than in the main topic itself. Community managers and marketers should take this finding into account when deciding about a community's focus and structure.

5.6.3 Concluding Remarks

This chapter has taken a top-down perspective on the issue of interpersonal influence within virtual communities of consumption by making use of existing theories about interpersonal influence in the traditional setting and examining their relevance in a virtual context. As a result, our study has investigated a wide range of factors that could explain community influence on consumer decision-making. Despite the many factors considered, the explanatory power of all our models for the three decision processes is not very high. This means that many other factors are related to community influence on decision-making. Further research is needed to arrive at a more complete picture of the aspects that explain community influence on various consumer decisions, in particular with respect to decision processes that are more complex and risky. Further research should also overcome the most noteworthy limitation of this study, namely the use of self-reports about community influence on decision-making instead of actual behavioral data. Taken these limitations into account, our study has brought to light many interesting findings. The main take-aways are:

1. Virtual communities have profound influence on the consumer decision process, especially in the phases of information search and pre-purchase evaluation.
2. Determinants of interpersonal influence in the virtual context are similar to determinants of interpersonal influence in the traditional context.
3. However, contrary to many traditional reference groups, participation in virtual communities is a voluntary and purposeful act. Norms cannot be enforced, but nevertheless appear to be taken into account.
4. As an information source, the virtual community is even valued higher than other sources including traditional media.
5. Community influence on decision processes that are characterized by a higher degree of complexity and risk is less profound and associated with a limited number of determinants. Further research is needed to determine the underlying reason.

We now turn our focus from the determinants and effects of virtual community influence to the underlying process of virtual community participation. Instead of the theoretical, top-down approach taken in this chapter, in the next chapter, we follow a data-driven, bottom-up approach. We will investigate the diverse patterns of participation that can be discerned between community members and link those patterns to levels of community influence on consumer decision-making. By doing so, we build upon this chapter's findings about community participation and its effect on the consumer decision process in general and connect it to insights in community member types, their participatory role in the community, and the related influence of the community on their consumer decisions.

Chapter 6

Patterns of Participation
A Classification of Virtual Community Members

"I subscribed as a member in the summer of 2001, because I liked to use the recipe database. At that time I had no idea of all the other things that you could do on the SmulWeb sites. I had not a clue that it actually was a virtual community .I started with adding one recipe and I really liked it that it appeared on my personal SmulWeb page. So, I entered more recipes to the database and I started to surf around to see what else I could do. I visited other members' personal pages that were decorated with illustrations and other things. And I thought that it would be very nice to dress up my own personal page. That is how I got involved in the SmulWeb community."

"When I just started I said to myself that I should not spend too much time online. And I have really restricted myself at first. But nowadays I am online all day long. I have two computers at work, so I can work on one and then have the other reserved for SmulWeb and participate in forums, et cetera, in a spare half hour. I also participate from my home computer; every day about an hour or so. I add articles and reviews from my home computer."
(Excerpts from personal interview with Julia on April 5, 2002, Amsterdam)[15]

6.1 INTRODUCTION

In the first excerpt, a SmulWeb member describes how she gets acquainted with the virtual community and several of its features. She remembers the lure of fancy member web pages (containing biographies, illustrations, music, pictures, et cetera), and the lists of contributions that appear on each member's personal site. She decides to become an active contributor herself. Soon she has made contact with many other active members through messages in guest books, forum discussions, and private email exchanges. In the second excerpt she tells the interviewer how she fits in her SmulWeb activities in her everyday life. It is obvious that she spends quite some time online. Starting with a limited number of hours, she now

[15] The interview was conducted in the Dutch language. Translation by Kristine de Valck. Julia is a pseudonym.

participates in the SmulWeb community on an almost continuous basis with a second computer facilitating constant access during working hours and a home computer for access during nights and weekends.

Of course, not all virtual community members are as active in participating. Some visit the community regularly to search for information, but never make a contribution themselves. Others are frequent review writers or focus solely on adding recipes to the database. Some members come by every day; others visit the community only once a month. Some members spend many hours online during each visit; surfing around, reading posts, making a contribution here and there. Others just take 10 minutes to locate the information they need and leave the community directly after they found what they were looking for. Obviously, the level of community influence will differ depending on members' participatory behaviors. It is the diverse patterns of virtual community participation that we focus on in this chapter. In contrast to the previous chapter in which we imposed an a-priori theoretical framework to examine community influence on the consumer decision process, in this chapter we follow a data-driven, bottom-up approach. Our goal is to arrive at a typology of virtual community members based on patterns of visit frequency, visit duration, and online behavior. We will relate these participation patterns to the community membership characteristics and general consumer characteristics introduced in Chapter 5. Finally, we examine community influence on decision-making experienced among the different types of virtual community members.

This chapter is organized as follows. Section 6.2 introduces the conceptual framework of the intended typology and discusses its contribution compared with existing typologies. In Section 6.3 we discuss the research methodology and give the results of our cluster analysis. We extend the member typology to patterns of virtual community influence on the consumer decision process for three different consumption activities in Section 6.4. Finally, Section 6.5 contains a discussion of the main findings.

6.2 CONCEPTUAL FRAMEWORK

6.2.1 Existing Typologies of Virtual Community Members

To date, the most widely used typology of virtual community members is the dichotomy lurkers versus posters or contributors (e.g., Baym 1995, 1998; Reid 1993; Rheingold 1993; Granitz & Ward 1996; Okleshen & Grossbart 1998; Brown et al. 2002). This distinction is based on members' passive or active participation in the community's interaction network. Lurkers merely read posts. Usually, their online presence goes by unnoticed, because they observe the online interaction without reacting, writing, or communicating with other

members. Lurkers stay 'in the dark', while posters/contributors come out 'in the spotlight'. Posters read posts, but they also write reactions, start discussion threads themselves, or use other ways to publicly communicate with other members. Conventional wisdom suggests that lurkers make up roughly 80% of any virtual community's member database, while only 20% of the members act as the performers of the community's online conversations (e.g., Baym 1995; Rheingold 1993; Hagel & Armstrong 1997). The lurker-poster dichotomy offers a limited perspective on the diverse and flexible nature of virtual community participation behavior. It advances the idea that the majority of community members invariably behave like invisible eavesdroppers.

Instead of focusing on passive versus active participation, other typologies take member involvement in the virtual community as the basis of distinguishing among community members. This allows for a larger variety of member types. Kim (2000) describes five prototypal member roles based on progressive stages of community involvement. She labels these five types as follows: (1) visitors are people without a persistent identity in the community, (2) novices are new members who need to learn the ropes and be introduced into community life, (3) regulars are established members who are comfortably participating in community life, (4) leaders are volunteers, contractors, and staff who keep the community running, and (5) elders are longtime regulars and leaders who share their knowledge, and pass along the culture. This typology takes as the main dimension to discern among virtual community members the progression in time, which is, according to Kim, inevitably connected to an increasing involvement in the community reflected by more responsibilities and more power. Implicitly, these member roles also reflect the level of active participation in the community. At the beginning of the membership life cycle, active participation is low. It presumably goes up with each successive stage in member involvement, until it has reached its highest point when members have become community leaders. Elders might still actively participate, but they have already taken one step away from the spotlight. Eventually, the membership life cycle ends with separation from the community.

This typology of progressive member roles advances the idea that participation behavior in the community changes over time. Thus, it is less static than the lurker-poster dichotomy. However, it has a rather normative character in the sense that all community members are presumed to evolve from visitors to elders. In reality, not all members will go through the successive stages described by Kim. The virtual community member typology developed by Kozinets (1999) justifies why this is the case. He introduces the dimensions topical involvement and social involvement to arrive at a classification of four member types within virtual communities of consumption: (1) tourists are members who have a vague or passing interest in the community's topic of interest, and who lack strong social ties with other members, (2) minglers maintain strong social ties, but are only superficially interested in the

central topic, (3) devotees are opposite to this: they maintain a strong interest in and enthusiasm for the community's central topic, but have few social attachments to the group, and (4) insiders are those who have strong interest in the community's topic, as well as strong social ties with other members. Members' topical and social involvement translates into participation behavior in the community. In this respect, Kozinets discusses several, so-called interaction modes. Tourists and devotees are not interested in maintaining social relations with other members. Their participation behavior will be aimed at topical information exchange. If they only strive for personal gain, the needs of other community members will be ignored by simply using members' resources and not returning anything of benefit to the community, i.e., they act as lurkers. In contrast, minglers and insiders tend to be much more socially oriented in their participation behavior. They invest in personal relations, which require engagement in direct interactions with other members. In Kim's terminology, it will be especially the insiders that turn out to be the community's leaders, since they combine a high topical interest with strong communal feelings. Tourists, on the other hand, might remain infrequent visitors during their entire membership

The lurker-poster dichotomy, as well as the typology of progressive member roles, are not based on empirical research. Rather, these typologies address common sense, meant to have direct appeal to practitioners by offering insight in community dynamics. Their virtual community focus is generic. Kozinets develops his typology to support a revised framework of relationship marketing in the specific context of virtual communities of consumption. Insight into the different types of virtual community members adds nuance to marketers' existing understanding of virtual community participation behavior. Although virtual community members might seem united in their loyalty towards a specific form of consumption, within the group there are important divisions, which can be seen as tribes. These tribes may turn out to be a multitude of market niches. Kozinets' argument for e-tribalized marketing strategies results from extensive fieldwork in the realm of virtual communities of consumption (Kozinets 1997; Kozinets 1998; Kozinets & Handelman 1998). His distinction between member types arises from online ethnographic investigations, i.e., netnography. However, the distinction is not developed beyond a conceptual level.

To our knowledge, only two researchers have initiated a virtual community member typology based on empirical research. Utz develops a classification of Multi-User-Dungeon players based on their relative involvement in game playing and role-playing, as well as their skepticism towards the usefulness of MUDs for developing friendships (Utz 2000).[16] Mathwick classifies online shoppers based on their relationship orientation and their online

[16] A Multi-User-Dungeon (MUD) is a special type of virtual community; it is a graphical fantasy world in which participants solve quests, thereby usually combating each other.

relational behavior (Mathwick 2002). She focuses on transactional communities, designed to support the buying and selling of products or services. However, to arrive at her classification, she takes one step back to examine which online shopper type participates in these and other online communities. Thus, her classification is not truly a typology of virtual community members. In the context of this study that focuses on virtual communities of consumption, these typologies have little relevance, because of their narrow and specific applicability. Nevertheless, to be complete, we have listed them in the overview of existing typologies (Table 6.1).

Table 6.1
Overview of existing virtual community member typologies

	Various authors	**Kozinets (1999)**	**Kim (2000)**	**Utz (2000)**	**Mathwick (2002)**
Focus	generic	consumption communities	generic	multi-user-dungeons	online shoppers
Classifying Dimension	behavior	involvement	involvement over time	individual trait & involvement	individual trait & behavior
Static/ Dynamic	static	dynamic	dynamic	static	static
Empirical research	-	no	no	yes	yes
Labels	*lurkers*	*tourists*	*visitors*	*skeptical players*	*transaction oriented members*
	posters/ contributors	*minglers*	*novices*	*game players*	*socializers*
		devotees	*regulars*	*role players*	*personal connectors*
		Insiders	*leaders*	*chatters*	*lurkers*
			elders		

Because of its straightforward and broad applicability across various online environments, only the lurker-poster dichotomy has been widely adopted by managers and academics. In respect of virtual community research, it has been used to investigate, among other things, the development of the communal spirit in virtual communities and the formation of online friendships (e.g., Baym 1995; Reid 1993), online influencing patterns (e.g., Granitz & Ward

1996), perceived membership and community influence on behavior (e.g., Okleshen & Grossbart 1998), and differences in online buying behavior (e.g., Brown et al. 2002).

Our goal is to further develop this popular distinction of participation behavior based on behavioral dimensions, thereby building on the insights about differences in the amount and form of member participation as conceptualized in the typologies of Kim and Kozinets. We use empirical data to define the classification. In the next paragraph, we discuss the conceptual foundations of our community member typology.

6.2.2 Towards a Classification Based on Patterns of Participation

Understanding the nature of participation in virtual communities is a still-nascent domain of scholarly research. It is generally asserted that there are differences in the amount and the form of participation between community members (see the existing typologies). But to date, to the best of our knowledge, no *systematic empirical* research has been conducted to investigate these differences in the context of virtual communities of consumption. The simplistic lurker-poster dichotomy ignores the diversity that can be found in *how* members lurk and post (i.e., how often? for how long? what do they get and what do they bring?); thus, it offers marketers limited insights on how to locate interesting and valuable member segments and how to address them.

The goal of this study is to develop a virtual community member typology that classifies community members on the basis of five behavioral dimensions that discern them in terms of visit frequency, visit duration, and the extent to which they retrieve, supply, and discuss information. The resulting member typology is profiled on other variables related to community membership and general consumer characteristics. Thus, we arrive at a more realistic and richer representation of virtual community participation behavior, that enables us to formulate marketing strategies that fit the profile and particular way in which each member type participates in the virtual community.

Table 6.2 summarizes the conceptual foundations of the intended member typology. Visit frequency and visit duration are indicators of members' general involvement in the community. They do not only indicate the total level of participation, but also how it is shaped. After all, members may combine a modest visit frequency with short visit duration, a regular visit frequency with long visit duration, their participation pattern may consist of infrequent, long visits, or the opposite, i.e., frequent and short visits, or it could be some other variant. We have included these variables in our typology to account for the differing levels and varying shapes of engagement in the community in line with Kim's conceptualization of increasing levels community involvement. However, different from

Kim, we do not focus on the dynamic development of community membership, but examine differences in the level and the shape of participation between members.

Table 6.2
Conceptual foundations of this study's community member typology

Virtual Community Member Typology Based on Patterns of Participation	
Focus	communities of consumption
Dimension type	behavior: Frequency of visits; Duration of visits; Retrieve information; Supply information; Discuss information
Empirical research	yes

Furthermore, we include variables that represent how members behave while they visit the community. What kind of activities do they undertake? We focus on three activities that are related to the exchange of information in a public arena, i.e. retrieving information from the community in the form of recipes, reviews, and articles, supplying information to the community in the form of recipes, reviews, and articles, and participating in the community's forum discussions and/or chat room. Of course, participation in virtual communities of consumption may consist of a range of other activities, such as maintaining one's personal home pages within the community or exchanging private messages with other members. Including all possible activities in a member typology, however, would make it too detailed and complex. Therefore, we focus on the activities that are most interesting from a marketing perspective. Together, retrieving, supplying, and discussing information represent the functioning of the community as a word-of-mouth network. The relative extent to which a member is involved in each of these activities gives a more relevant insight in participation behavior than merely establishing if a member contributes or not.

We distinguish discussing information in the community's forums and chat room from supplying information to the community's database as a separate and important aspect of community participation. Members who participate in forum discussions and chat sessions interact directly with other members. It is this level of direct interaction that sets the discussion of information apart from supplying information. The discussion of information requires the input of others, while the act of supplying can be done without the interference of other members. Posting information to the community is, therefore, distinctly different from discussing information in the community's forums and chat rooms. The first activity relates to Kozinets' conceptualization of a functional interaction orientation (focus on factual

documents), whereas the second relates to a social interaction orientation (focus on interactive encounters).

We develop our typology on the basis of data collected by the online survey discussed in Chapter 4. For information about the questionnaire development and pretesting of our survey instrument we refer to that chapter. Note that the five classification variables of the intended typology are similar to the variables representing community interaction characteristics that we have introduced in Chapter 5. Detailed information about construct definitions and measurements of the classification variables can be found in Chapter 5.

Although our classification is based on survey data consisting of subjective measures of behavior, member behavior can also be tracked by means of a member identification system and a database that files all online visits to and activities within the community. Consequently, marketers can use our typology along with the automated, objective, and unobtrusive detection of member participation patterns to segment community members. This is a major improvement over the existing typologies that require subjective measures of member involvement. Our focus is on virtual communities of consumption. However, since the classification criteria are rather generic, the typology can also be used for other types of virtual communities in which information exchange takes place between participants.

6.2 CLUSTER ANALYSIS

The typology based on the five classification variables is developed with the use of cluster analysis. This is a data analysis technique used to classify objects or cases into relatively homogeneous groups called clusters. Objects in each cluster tend to be similar to each other and dissimilar to objects in the other clusters (Malhotra 1996). In case of our typology, respondents will be grouped on the basis of their participation patterns, i.e., the combination of frequency of visits, duration of visits, and the extent to which members retrieve, supply, and discuss information. Thus, the goal is to maximize the homogeneity in the respondent participation patterns within each cluster, while at the same time maximizing the heterogeneity in the respondent participation patterns between the clusters. In cluster analysis there is no a priori information about the groups. It is a post hoc segmentation method, i.e. clusters are suggested by the data after examination of the entire set of interdependent relationships of the variables considered (Wedel & Kamakura 1998). The majority of clustering methods are relatively simple procedures that are not supported by an extensive body of statistical reasoning. Rather, most clustering methods are heuristics, which are based on algorithms (Malhotra 1996). The solutions are not unique, as the cluster membership for

any number of cluster solutions is dependent upon many elements of the procedure, and many different solutions can be obtained by varying one or more elements. Consequently, cluster analysis has been characterized as descriptive, a-theoretical, and non-inferential (Hair et al. 1998).

The use of cluster analysis has frequently been viewed with scepticism, because of the confusing plethora of names and methods and the lack of specificity, in most published research, about the cluster analysis approach that is taken. Cluster analysis is in fact not a single technique, but encompasses a relatively wide variety of techniques that attempt to form clusters. This situation results from the fact that the set of cluster analysis methodologies has developed outside a single dominant discipline. There are many clustering algorithms available, each fit for specific purposes, data sets, and methods. (Punj & Stewart 1983; Wedel & Kamakura 1998). Punj and Stewart, as well as Wedel and Kamakura, call for a detailed reporting and a concise description of the motivation for the use of a specific method to overcome the obscurity surrounding the application of cluster analysis techniques. Hence, in the following paragraphs, we will discuss each step of our approach.

6.3.2 Variable Selection Issues

In Section 6.2 we have discussed the theoretical as well as the practical reasons for selecting frequency of visits, duration of visits, and the extent to which members retrieve, supply, and discuss information, as the input variables of our cluster analysis.[17] An important issue in the selection of variables that needs to be addressed is multicollinearity. Variables that are multicollinear are implicitly weighted more heavily and, as a result, may distort the cluster solution. Table 6.3 contains the correlation matrix of the five selected variables. The variables are standardized to *z*-scores due to data transformation issues discussed in the following paragraph. The matrix shows substantial collinearity between all variables. If a member scores high on one variable, he or she is also likely to score high on the other four. The correlations between the five cluster variables are about the same magnitude. Consequently, the correlation matrix does not reveal an underlying structure of various sets of variables. If we would find, for example, that supplying and discussing information are

[17] In the data exploration phase, we have expanded our cluster analysis with the three variables representing membership characteristics, namely topical involvement, social involvement, and membership length (see Chapter 5). By including both the membership characteristics and the community interaction characteristics, we hoped to arrive at a typology based on a complete picture of virtual community membership aspects. However, the results of these analyses were inferior to the analyses including only the five participation variables in terms of stability and interpretability. The inclusion of these extra variables hampered an optimal clustering solution (cf., Gnanadesikan, Kettering & Tsao 1995). Therefore, we have decided to stick to the typology based on participation patterns alone.

highly correlated with each other, but not with the other variables, then our cluster solution would be distorted, because the dimension 'active participation' would have more chance to affect the solution (two items versus one item for the other variables that represent separate dimensions). In this case, we expect no major distortion of our cluster solution, and we do not exclude any of the selected variables.

Table 6.3
Correlations among cluster variables*

	Frequency of visits	Duration of visits	Retrieve information	Supply information	Discuss information
Frequency of visits	1.0				
Duration of visits	0.4**	1.0			
Retrieve information	0.3**	0.2**	1.0		
Supply information	0.5**	0.3**	0.4**	1.0	
Discuss information	0.4**	0.2**	0.3**	0.5**	1.0

* The correlation coefficient used is Spearman's Rho. Variables are standardized to *z*-scores.
** Significant at the 0.01 level (2-tailed).

6.3.3 Data Transformation Issues

The scaling of variables can have a tremendous impact on the cluster solution. In general, variables with a larger dispersion have more impact than variables with a smaller dispersion. Therefore, one should be aware of the implicit weighting of variables based on their relative dispersion. In case of our five variables, the scaling indeed differs. Frequency of visits is measured on a seven-point rating scale, duration of visits is measured on a six-point rating scale, and the three online activities are measured on five-point rating scales (see Chapter 5). Because the Euclidean distance measure that we have applied is not scale invariant, standardization of the variables is appropriate (Hair et al. 1998; Wedel & Kamakura 1998). The most common form of standardization is the conversion of each variable to standard scores, also known as *z*-scores, by subtracting the mean and dividing by the standard deviation of each variable. This process converts the raw data score of the variables into standardized values with a mean of zero (0) and a standard deviation of one (1). Milligan and Cooper (1988) have studied eight forms of standardization including the traditional *z*-score and they concluded that the use of this standardization procedure is not optimal in several

situations varying in terms of, among other things, separation distances and clustering methods. However, it does perform superior to other procedures when used with the Ward's method that we apply in our cluster analysis.[18] Because standardization of the raw data eliminates the effects due to scale differences, and because it is much easier to compare between variables when they are scaled in a similar way, we transform our data to standardized *z*-scores.

6.3.4 Clustering Procedure

Clustering methods can be classified into non-overlapping methods, overlapping methods, and fuzzy methods. We focus on the non-overlapping methods that assign an object to one and only one cluster. Commonly, two different types of non-overlapping clustering methods are distinguished: hierarchical and non-hierarchical methods (Wedel & Kamakura 1998). The hierarchical clustering methods represent a stepwise clustering procedure involving a combination (or division) of the objects into clusters, which results in the construction of a hierarchy, or treelike structure, depicting the formation of clusters. The non-hierarchical clustering methods differ from hierarchical clustering procedure in that they do not seek a tree structure in the data. Instead, the data are partitioned into a predetermined number of segments using cluster seeds to group objects within a pre-specified distance of the seeds (Hair et al. 1998).

Based on a review of the application of cluster analysis in marketing research, Punj and Stewart (1983) have concluded that the non-hierarchical models are generally superior to the hierarchical models. They are more robust to outliers, the distance measure used, and the presence of irrelevant variables. Non-hierarchical methods are also faster than hierarchical methods, and they can easily be applied to large samples. Taken the characteristics of the hierarchical and non-hierarchical clustering methods into account, the non-hierarchical clustering approach fits better with our sample size of 1007 respondents. The disadvantage of this approach is that the number of clusters must be pre-specified and that the selection of the cluster seeds is arbitrary. Based on their meta-analysis, Punj and Stewart (1983) recommend obtaining an initial cluster solution using a hierarchical procedure. The number of clusters and cluster seeds so obtained can be used as inputs for a non-hierarchical procedure that fine-tunes the results by allowing the switching of cluster membership. In the following paragraphs, we describe the application and the results of this two-step clustering procedure.

[18] Milligan & Cooper's simulation only included hierarchical clustering methods. Hence, their study does not offer information about the effect of standardization on the results of non-hierarchical cluster analysis. Since the criterion of the Ward's method used in our hierarchical analysis and the *k*-means clustering method used in our non-hierarchical analysis are equivalent, we assume that *z*-score standardization procedure can also be applied to our non-hierarchical clustering technique without corrupting the outcome of the solution.

6.3.5 Hierarchical Cluster Analysis

We have performed a hierarchical cluster analysis as an exploratory step to identify a candidate number of clusters to be used in the non-hierarchical clustering procedure. No standard, objective stopping rule procedure exists. Deciding on the number of clusters is, therefore, subject to theoretical, conceptual, and practical considerations (Malhotra 1996). The objective of the cluster analysis, developing a virtual community member typology, has implications for the number of clusters to distinguish. Intuitively, a typology of about four to eight clusters would be most suitable. The majority of the existing community member typologies consist of four classes. Fewer clusters would have a level of detail that is too limited, compare in this respect the superficial distinction between lurkers and posters. However, more than eight clusters would be at the cost of surveyability, because the distinction between groups becomes too detailed and group sizes become too small, inhibiting meaningful implications. We have considered a range of cluster solutions, thereby using the distance at which clusters are combined as a stopping rule, because of its proven accuracy in other empirical studies (Milligan & Cooper 1985).

Given the size of the sample, hierarchical clustering of the entire data set was not practical, because of data storage limitations. Thus, we have drawn a series of 10 randomly selected sub-samples (each 20% of the entire sample) that we have analyzed separately (cf., Cannon & Perrault jr. 1999; Mathwick 2002). In this initial hierarchical cluster analysis, we have applied the Ward minimum variance method of clustering, using the squared Euclidian distance measure.[19] Table 6.4 contains the analyses of the agglomeration coefficients (i.e., the within-cluster sum of squares) and the percentage change in the coefficients of these 10 hierarchical cluster analyses. Small coefficients indicate that fairly homogeneous clusters are merged. Joining two very different clusters results in a large coefficient or a large percentage change in the coefficient. When a large increase occurs, one should select the prior cluster solution on the logic that its combination caused a substantial decrease in similarity between the clusters (Milligan & Cooper 1985).

[19] Together with the average linkage method, the Ward's clustering method has demonstrated superior performance (Punj & Stewart 1983). In Ward's method, the distance between two clusters is the sum of the squared Euclidean distance between the two clusters summed over all variables. The Ward objective is to find at each stage those two clusters whose merger gives the minimum increase in the total within group error sum of scales. This procedure tends to combine clusters with a small number of observations. It is also biased toward the production of clusters with approximately the same number of observation (Hair et al. 1998).

Table 6.4
Agglomeration schedule*

	8 clusters	7 clusters	6 clusters	5 clusters	4 clusters	3 clusters	2 clusters	1 cluster
Sample 1	337.2	365.7	399.4	438.3	488.0	545.8	692.4	965.5
n = 203	(8.4)	(9.2)	(9.7)	(11.4)	(11.8)	(26.9)	(39.5)	-
Sample 2	309.2	336.2	369.5	404.9	446.4	511.1	624.6	867.0
n = 191	(8.7)	(9.9)	(9.6)	(10.3)	(14.5)	(22.2)	(38.8)	-
Sample 3	398.2	423.5	457.0	501.4	553.2	638.6	747.3	1064.2
n = 206	(6.4)	(7.9)	(9.71)	(10.3)	(15.4)	(17.3)	(42.4)	-
Sample 4	390.2	421.8	461.5	504.8	558.2	632.7	716.6	1019.2
n = 203	(8.1)	(9.4)	(9.4)	(10.6)	(13.4)	(13.3)	(42.2)	-
Sample 5	384.6	414.1	453.5	505.0	560.1	628.6	738.0	1033.9
n = 223	(7.7)	(9.5)	(11.4)	(10.9)	(12.2)	(17.4)	(40.1)	-
Sample 6	385.6	417.7	456.9	498.8	571.5	644.7	753.2	1137.0
n = 211	(8.3)	(9.4)	(9.2)	(14.6)	(12.8)	(16.8)	(50.9)	-
Sample 7	393.3	422.4	458.5	496.4	559.3	639.0	763.4	1144.2
n = 205	(7.4)	(8.6)	(8.3)	(12.7)	(14.3)	(19.5)	(49.9)	-
Sample 8	348.4	373.6	402.1	448.8	508.2	574.1	667.6	969.4
n = 191	(7.2)	(7.6)	(11.6)	(13.2)	(13.0)	(16.3)	(45.2)	-
Sample 9	397.7	421.3	456.3	503.5	554.0	634.9	770.5	1122.4
n = 213	(5.9)	(8.3)	(10.3)	(6.1)	(14.6)	(21.4)	(45.7)	-
Sample 10	336.3	362.1	402.8	449.7	499.5	563.7	675.9	896.2
n = 191	(7.7)	(11.2)	(11.7)	(11.1)	(12.9)	(19.9)	(32.6)	-

* The table contains the nine final agglomeration coefficients of the hierarchical cluster analysis of 10 randomly selected sub-samples. The coefficient percentage change to the next level is annotated in parentheses.

In all 10 samples, the largest percentage change in the agglomeration coefficient occurs in going from two clusters to one cluster. However, a classification of only two groups of members is so undifferentiated that it has hardly any relevance. It results in a distinction between a large group of members (70%) who score below the sample mean on all five clustering variables and a small group of members (30%) who score above the sample mean on all five clustering variables. Note that this distinction does not equal the lurker-poster dichotomy, since the first group is not highly engaged in retrieving or supplying information, whereas the second group is very engaged in both activities. Rather, it represents the division between the community's peripheral and core members. Although this distinction is meaningful, is does not do justice to the variety of participation behaviors that can be discerned if one takes the classification a step further and starts noticing various layers of more or less enthusiastic community membership.

If we go back to the agglomeration schedule, we find that in nine out of 10 samples, the second largest increase in the agglomeration coefficient occurs in going from three to two clusters. The three-cluster solution results in a classification of a group that scores highest on all variables, a group that scores lowest on all variables, and a group whose scores fall in between. Although this distinction of participation patterns offers more nuance than a partition in two segments, it is still rather obvious and offers no real new insight in the diversity of participation patterns. Going from four to three clusters offers in all 10 samples a large increase in the agglomeration coefficient, which makes the four-cluster solution a good candidate. Nevertheless, the choice for a solution of five or six clusters is also supported by the data, especially when we compare the relative increases in the agglomeration coefficient of these solutions with the coefficients of the cluster solutions containing seven or eight clusters.

By scrutinizing the dendrograms, we could observe that the four-cluster solution combines big clusters into even bigger clusters. Thus, in the four-cluster solution, respondents are classified into two very large clusters and two small clusters. A similar picture applies to the five-cluster solution, although to a lesser extent. The six-cluster solution, on the other hand, consists of two small clusters and four medium-sized clusters. Because the relative sizes of the clusters should also be meaningful (Malhotra 1996), the six-cluster solution might be the most appropriate one. It is advised to compute a number of different cluster solutions in the second step of the clustering procedure (i.e., the non-hierarchical cluster analysis) and then select the best alternative after evaluating all of them (Hair et al. 1998; Malhotra 1996). Therefore, based on the results of the hierarchical analyses, we have decided to execute a non-hierarchical clustering procedure for the three-, four-, five-, and six-cluster solutions.

6.3.6 Non-hierarchical Cluster Analysis

Since the hierarchical cluster analysis is performed on sub-samples that each represent only 20% of the original sample, we deem the selection of seed points by the hierarchical cluster analysis not to be representative. To determine the cluster seeds, we have performed a non-hierarchical, *k*-means cluster analysis with a 50% sub-sample of the original sample, taken at random.[20] There are several different approaches for selecting cluster seeds and assigning objects to one of the clusters. We discuss the parallel threshold method supported by SPSS and used in our analysis. This method selects several cluster seeds simultaneously at the start

[20] In the *k*-means clustering procedure, distances are computed using the simple Euclidean distance measure. The objective is equivalent to the Ward's method, i.e. minimizing the sum of the squared Euclidean distances between objects and their cluster seed. A problem related to this criterion is that it is scale dependent. Therefore, standardization of the data is recommended (Wedel & Kamakura 1998).

and assigns objects within the threshold distance to the nearest seed. As the process evolves, threshold distances can be adjusted to include fewer or more objects in the clusters (Hair et al. 1998). On the basis of this training sample, we have determined the initial seed points. In a second non-hierarchical, *k*-means cluster analysis based on the entire sample, we have used these initial seed points as inputs for the final cluster solution.

We have performed this procedure for the three-, four-, five-, and six-cluster solutions. Besides, we have repeated the procedure three times for each cluster solution. This is done, because in non-hierarchical clustering the solution may depend on the order of cases in the data set (Malhotra 1996). Therefore, we have made multiple runs using different ordering of the cases. The results are compared to determine the stability of the solution and to assess the internal validity. Thus, in total we have performed 24 *k*-means cluster analyses. The number of iterations required to reach a final solution varied from nine to thirty-one. A comparison of the results reveals that the three- and the six-cluster solutions are more stable than the four- and the five-cluster solutions with respect to the signs and the values of the cluster centers in the different orderings of the cases (see Appendix E). With regard to the level of detail, the six-cluster solution is preferred over the three-cluster solution. Hence, in the remainder of the chapter we will focus on the six-cluster solution as the basis of our virtual community member typology.

Before we turn to the interpretation and profiling of the clusters, we discuss another validity check that we executed to make really sure that the cluster solution was not arbitrary. We have followed the steps for assessing relative validity suggested by Milligan (1994). The sample is randomly split in halves. We perform a *k*-means cluster analysis on the first sub-sample using the cluster seed points from the final six-cluster solution of the entire sample as initial seed points.[21] The same procedure is repeated for the second sub-sample. Then, the final cluster solution that is achieved with the first sub-sample is used as input for a *k*-means cluster analysis of the second sub-sample. Finally, we compare the results of the two classifications of the second sub-sample (see Appendix F). Since the level of similarity between the two classifications is satisfactory with respect to the signs and the values of the cluster centers, we accept the six-cluster solution as valid. Information essential to the interpretation of the clusters is provided in Tables 6.5 and 6.6.[22]

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[21] Retrieving the initial seed points by first randomly selecting a 50% sub-sample of the already split sample is not to be recommended, since the representativeness of the second sub-sample (25% of entire sample) is questionable.

[22] Note that we have reported the final cluster center values of the order C cluster solution. Although the final cluster centers in order A, B, and C are similar, they are not exactly the same (see Appendix E). Consequently, the ANOVA-results used to profile the clusters vary with the cluster solution chosen. However, these differences are small-scale, so they do not corrupt the overall interpretation.

Table 6.5
Distances between final cluster centers*

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6
Cluster 1	-					
Cluster 2	2.7	-				
Cluster 3	3.5	2.1	-			
Cluster 4	3.8	2.6	1.9	-		
Cluster 5	4.9	2.8	2.1	2.0	-	
Cluster 6	5.5	3.3	3.0	2.4	1.4	-

* The distance measure of similarity used is the Euclidean distance.

Table 6.6
Final cluster centers*

	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**	**Cluster 5**	**Cluster 6**	ANOVA
	n_1 = 59 6%	*n_2 = 102 10%*	***n_3 = 144*** *14%*	*n_4 = 169 17%*	*n_5 = 281 28%*	*n_6 = 252 25%*	F-statistic (p-value)
Frequency of visits	1.5	0.5	0.4	0.9	-0.6	-0.8	**241.9** (0.00)
Duration of visits	1.8	-0.3	0.1	0.8	-0.3	-0.6	**143.2** (0.00)
Retrieve information	1.1	0.5	1.1	-0.4	0.3	-1.1	**293.4** (0.00)
Supply information	1.8	0.9	1.0	0.1	-0.6	-0.7	**313.4** (0.00)
Discuss information	2.5	1.7	-0.3	-0.3	-0.5	-0.4	**713.9** (0.00)

* The table contains average *z*-scores and ANOVA results. F-values printed in bold are significant ($p \leq 0.05$).

6.3.6 Interpretation of the Clusters

The result of the cluster analysis is a classification of the respondents into six clusters. Between the clusters there is a maximal difference and within the clusters there is a maximal homogeneity in terms of participation patterns. From Table 6.5 we conclude that the distance between Clusters 1 and 6 is largest, which means that the respondents in these two clusters are most dissimilar in their participation pattern. On the other hand, Clusters 5 and 6 are least dissimilar from each other; the distance between these clusters is smallest. To further explain what the differences between the clusters entail, we need to scrutinize the mean values of the

five variables used in the cluster analysis that are reported in Table 6.6. Note that the values are standardized, thus they represent how much the scores fall under or above the mean in terms of a fraction of the standard deviation. Table 6.6 also reports the number and percentage of respondents in each cluster. Cluster size varies from 59 respondents to 281 respondents. Finally, the ANOVA results reported in Table 6.6 point to the levels of significance for the differences across the clusters. All five variables are significantly different between clusters. To facilitate the interpretation of the clusters, we have reported the unstandardized mean values of the five clustering variables in Table 6.7. Together, they represent the cluster profiles for community interaction characteristics.

Table 6.7
Member type profiles for community interaction characteristics[a]

	6%	*10%*	*14%*	*17%*	*28%*	*25%*	N= 1007	ANOVA
	Core members	*Conversationalists*	*Informationalists*	*Hobbyists*	*Functionalists*	*Opportunists*	Sample mean	F-statistic (p-value)
Frequency of visits[b]	6.3	4.7	4.5	5.3	2.9	2.5	3.8	**241.9** (0.00)
Duration of visits[c]	4.5	2.2	2.7	3.4	2.3	1.9	2.6	**143.2** (0.00)
Retrieve information[d]	3.6	3.2	3.6	2.5	3.0	2.0	2.8	**293.4** (0.00)
Supply information[d]	3.5	2.7	2.7	1.9	1.4	1.3	1.9	**313.4** (0.00)
Discuss information[d]	3.0	2.5	1.2	1.2	1.1	1.1	1.4	**713.9** (0.00)

[a] The table contains unstandardized mean values and ANOVA results. F-values in bold are significant ($p \leq 0.05$).
[b] Values range from 1-7 (1=less often; 2=2-3 x p/month; 3=1 x p/week; 4=2-3 x p/week; 5=4-5 x p/week; 6=5-6 x p/week; 7=several times p/day).
[c] Values range from 1-6 (1=<15 min; 2=15<30 min; 3=30<60 min; 4=60<90 min; 5=90<120 min; 6=≥120 min).
[d] Values range from 1-5 (1=I never do it; 5=I do it very often).

Core members: The respondents in the first cluster, the smallest of the clusters, represent the hard core of most active participants within the community. They score on all variables far above the mean. Compared with the other clusters, they are the community's most frequent visitors and their visits are also the most extended, i.e., they visit the community daily for about one and a half hours. They make extensive use of the community's knowledge reservoir by retrieving information. At the same time, they are frequent suppliers to this knowledge reservoir by submitting recipes, articles, and reviews. Furthermore, they participate actively in forum discussions and chat sessions. We label them, therefore, the community's ***core members***. In total, six percent of all respondents in our sample belong to this group of leaders.

Conversationalists: The respondents in the second cluster make frequent, but short visits during which they participate to a relative high degree in supplying and discussing information. They visit the community three to four times a week for approximately half an hour. The respondents in this cluster retrieve and supply information, but not to such a high extent as the core members. It is especially their relative high level of engagement in forum discussions and chat sessions that characterizes their participation pattern. Therefore, we label them the community's ***conversationalists***. About 10 percent of the respondents make up this second cluster.

Informationalists: The respondents in the third cluster score relatively high on both retrieving information from and supplying information to the community, whereas they score low on discussing information. This group's visit frequency and duration is comparable to that of the conversationalists. However, they tend to visit the community somewhat less frequent, but they spend more time per visit. Together with the core members, they are the community's most extensive retrievers of information. They show reciprocity in their behavior by also supplying information to the community, although they do this to a lesser extent compared with the core members. This group's participation in the community's forums and chat rooms is low, which forms a sharp contrast to the core members and conversationalists, who are highly engaged in discussing information within the community. We label the respondents in this cluster the ***informationalists***, because of their focus on retrieving and supplying information. The group takes up about 14 percent of the respondents in our sample.

Hobbyists: This cluster stands out, because its members visit the community frequently for an extended time, but they score relatively low with respect to the amount of information retrieved and supplied, and the extent to which they participate in forum discussions and chat

sessions. After the core members, they are the community's most frequent visitors with long duration visits, i.e., they visit the community almost daily for about one hour. As said, their online activities are not primarily focused on the retrieval, supply, or discussion of information. Instead, they are engaged in updating and maintaining their personal page within the community and in writing guest book messages; activities that usually involve playing around with techniques such as uploading music, pictures, illustrations, and cartoons.[23] Therefore, we label this group the ***hobbyists***. This group is about the same size as the group of informationalists, representing 17 percent of the respondents.

Functionalists: The largest group in our sample is formed by the respondents in the fifth cluster. They score on four out of five variables below the sample mean. Only for the extent to which they retrieve information from the community, their score is higher than average. We already mentioned in the introductory paragraph, that Clusters 5 and 6 are at a close distance, indicating that they are not extremely dissimilar. The respondents in Cluster 6 score low on all variables. Thus, the main difference is that the respondents in Cluster 5 are much more eager retrievers of information compared with the opportunists. Although, the visit frequency and visit duration of both groups fall below the average, Cluster 5 has a smaller negative deviation. The respondents in this cluster visit the community approximately once a week for about 15 minutes. Because of their profound interest in retrieving information, we label this cluster the ***functionalists***. About 28 percent of the respondents belong to this group.

Opportunists: The respondents in the sixth cluster form the second-largest group. They score far below the mean on all five clustering variables. They are the community's least frequent visitors and their visits usually do not last long, i.e., they visit the community on average less than once a week for no more than 15 minutes. While they are online, they are mainly engaged in retrieving information in the form of recipes, not articles or reviews. They hardly supply any information, nor do they join forum discussions and chat sessions. This group represents the community's least active and least regular participants; therefore, we label them the ***opportunists***. This final group contains about 25 percent of the respondents.

[23] This conclusion is drawn after examination of the scores on the 17 items representing online activities undertaken within the community (survey question 17). Besides retrieving, supplying, and discussing information, we have asked respondents about the extent to which they participate in, among others, writing guestbook messages and updating and maintaining their personal webpage (see Appendix A). The respondents in Cluster 4 are relatively more engaged in these last activities than in the retrieval, supply, and discussion of information.

6.3.7 Profiling of the Member Types

Now that we have described the six groups of community members on the basis of their participation patterns, we perform an external validation procedure to examine whether the member types are related to variables other than those used to generate the solution (Punj & Stewart 1983). The member types are profiled on two sets of additional variables, i.e., membership characteristics and general consumer characteristics. Tables 6.8 and 6.9 contain the unstandardized mean values per variable for each member type. For all additional variables is checked whether there is a significant difference between the member types; this is done by means of an ANOVA. These results are reported in the final columns. Indeed, we find significant differences between the member types for all membership characteristics and almost all general consumer characteristics. Exceptions are other-directedness, the number of years someone has been using the Internet, and income. Post hoc test are performed to determine which member types significantly differ from each other per variable. On the basis of these results, we are able to characterize each member type beyond their participation pattern alone.

Table 6.8
Member type profiles for membership characteristics[a]

	6%	*10%*	*14%*	*17%*	*28%*	*25%*	N= 1007	ANOVA
	Core members	*Conversationalists*	*Informationalists*	*Hobbyists*	*Functionalists*	*Oppotunists*	Sample mean	F-statistic (p-value)
Topical involvement[b]	4.3	4.2	4.2	4.0	4.0	3.8	4.0	**11.8** (0.00)
Social involvement[b]	4.0	2.9	2.6	2.7	1.7	1.5	2.2	**177.8** (0.00)
Length membership[c]	3.8	3.3	3.4	2.8	2.8	2.8	3.0	**8.9** (0.00)

[a] The table contains unstandardized mean values and ANOVA results. F-values in bold are significant ($p \leq 0.05$).
[b] Values range from 1-5 (Statements, 1=strongly disagree; 5=strongly agree).
[c] Values range from 1-5 (1=<6 months; 2=6-12 months; 3=12-18 months; 4=18-24 months; 5=≥24 months).

Table 6.9
Member type profiles for general consumer characteristics[a]

	6%	*10%*	*14%*	*17%*	*28%*	*25%*	N= 1007	ANOVA
	Core members	*Conversationalists*	*Informationalists*	*Hobbyists*	*Functionalists*	*Oppotunists*	Sample mean	F-statistic (p value)
Orientation towards others								
Other directedness[b]	4.3	4.3	4.4	4.4	4.4	4.3	4.3	0.8 (0.58)
Susceptible norm. inf.[b]	1.4	1.5	1.3	1.4	1.3	1.3	1.3	**3.5** (0.00)
Susceptible info. inf.[b]	2.6	2.7	2.7	2.8	2.9	2.5	2.7	**2.6** (0.02)
Opinion leader[b]	4.0	3.8	3.7	3.6	3.4	3.1	3.5	**11.5** (0.00)
Opinion seeker[b]	3.4	3.6	3.5	3.4	3.5	3.2	3.4	**5.0** (0.00)
Offline expertise[c]	4.2	4.2	4.1	3.9	3.9	3.8	3.9	**7.1** (0.00)
Online expertise[c]	3.4	2.8	3.0	2.8	2.6	2.4	2.7	**15.9** (0.00)
Internet proficiency								
Webyears[d]	4.5	4.6	4.5	4.2	4.6	4.8	4.5	2.1 (0.07)
Webhours[e]	4.1	3.4	3.0	3.4	2.7	2.7	3.0	**14.8** (0.00)

[a] The table contains unstandardized mean values and ANOVA results. F-values in bold are significant ($p \leq 0.05$).
[b] Values range from 1-5 (Statements, 1=strongly disagree; 5=strongly agree).
[c] Values range from 1-5 (Evaluation, 1=little or no knowledge; 5=a great deal of knowledge).
[d] Values range from 1-7 (1=<1 yr; 2=1<2 yrs; 3=2<3 yrs; 4=3<4 yrs; 5=4<5 yrs; 6=5<6 yrs; 6=≥6 yrs).
[e] Values range from 1-5 (1=≤5 hrs; 2=6≤10 hrs; 3=11≤15 hrs; 4=16≤20 hrs; 5=>20 hrs).

Table 6.9 (cont.)
Member type profiles for general consumer characteristics[a]

	6%	*10%*	*14%*	*17%*	*28%*	*25%*	N= 1007	ANOVA
	Core members	*Conversationalists*	*Informationalists*	*Hobbyists*	*Functionalists*	*Oppotunists*	Sample mean	F-statistic (p value)
Demographics & Socioeconomic variables								
Age[e]	43.3	36.6	37.4	40.5	37.0	38.1	38.2	**5.2** (0.00)
Gender[f]	0.1	0.2	0.1	0.2	0.1	0.2	0.2	**2.3** (0.04)
Education[g]	3.9	4.3	4.2	4.0	4.5	4.4	4.3	**12.3** (0.00)
Income[h]	3.7	4.0	3.9	3.6	3.9	3.8	3.8	1.3 (0.26)

[a] The table contains unstandardized mean values and ANOVA results. F-values in bold are significant ($p \leq 0.05$).
[e] Values range from 6-80.
[f] Male vs. Female
[g] Values range from 2-5 (2=primary education; 3=lower secondary education; 4=intermediate secondary education; 5=higher education).
[h] Values range from 1-5 (1=<€ 1001 p/m; 2=€ 1001-1500 p/m; 3=€ 1501-2000 p/m; 4=€ 2001-2500 p/m; 5=> € 2500 p/m).

Core members: The core members are the community's most active participants in terms of visit frequency and duration, as well as the extent to which they are engaged in retrieving, supplying, and discussing information in the community. Furthermore, they have a strong tie with other members; this cluster's level of social involvement in the community is significantly higher than in the other clusters. Their culinary interest is profound. Especially within the community, their culinary expertise exceeds the expertise of other members. They characterize themselves to a greater extent as culinary opinion leaders than as culinary opinion seekers. Most of them are longtime members. Respondents in this cluster score significantly higher than the other clusters with respect to the intensity of their Internet usage. On average, they spent weekly up to 20 hours online. Relatively speaking, there are larger percentages of females and seniors (40+) in this cluster than in the other clusters. In terms of education level, this group of respondents scores on average lowest of all clusters.

Conversationalists: The conversationalists make frequent, short visits to the community during which they are especially highly engaged in forum discussions and chat sessions. Their topical interest is high and their level of social involvement in the community exceeds that of all other clusters, except the core members. That the respondents in this cluster are socially oriented is underscored by the fact that they are most susceptible to normative interpersonal influence. Thus, compared with the other clusters, they are more likely to conform to the expectations of others. They consider themselves to be culinary opinion leaders and, to a lesser extent, also culinary opinion seekers. Their culinary expertise is especially high compared with family, friends and acquaintances. Within the community, their culinary expertise is less extensive than that of the core members and the informationalists. Respondents in this cluster have been fairly longtime members of the community. They use the Internet on average for about 15 hours per week. The cluster has the relative largest percentage of members younger than 35 years. The percentage of males lies a bit above the community's average, whereas the level of education is a bit lower than average.

Informationalists: This group is strongly interested in the exchange of information through retrieving and supplying recipes, articles, and reviews, but not by participating in the community's forums and chat rooms. They are more than average socially involved with the other members, although not as much as the core members. Their topical involvement equals that of the conversationalists. They are second in row as the community's culinary experts. The respondents in Cluster 3 characterize themselves to about the same extent as culinary opinion leaders and as culinary opinion seekers, which is reflected in their online behavior. Cluster 3 consists of respondents who have been members of the community for an extended period of time, although the average membership length is shorter than that of Cluster 1. On average, they are moderate Internet users. This cluster has a relative large percentage of respondents who are younger than 35 years. The percentage of males and the education level lie just below the community's average.

Hobbyists: This group frequents the community several times a week for extended visits. Instead of heavily engaging in retrieving, supplying, and discussing information, they focus on online activities such as maintaining their personal home pages, and writing guest book messages. In contrast to the informationalists, this group is not so much concerned with broadening their culinary expertise, as with the fun and relaxation offered by their

membership.[24] Their topical interest in culinary matters equals the sample mean, but they are more than average socially involved in the community. Their culinary opinion leadership and expertise profile is also close to the sample mean. Respondents in this group are among the community's latest subscribers. They have the least Internet experience in years, but they are quite heavy Internet users, spending on average about 15 hours weekly online. Presumably, the Internet is a rather new phenomenon for them, and they use their community membership to recreationally explore all sorts of technical functionalities. In terms of demographics, this cluster consists of relative large percentages of males and seniors (40+). The level of education is relatively low.

Functionalists: The largest group in our sample is characterized by a participation pattern that approximately consists of a weekly, half an hour visit, which is primarily used to expand culinary knowledge. Thus, the functionalists engage in retrieving information, but almost not in supplying and discussing information. They are also hardly involved in the social relationships among the members. They characterize themselves more as culinary opinion seekers than as culinary opinion leaders, and they report that their culinary expertise is less profound relative to other members. The respondents in this group are least susceptible to normative interpersonal influence, while they are most susceptible to informational interpersonal influence. This underscores their focus on information instead of socialization. They have not been members of the community for a long period of time. They are light Internet users. Relatively speaking, the group of functionalists consists of a large percentage of youngsters and the percentage of females is larger than the sample's average. Compared with the other clusters, this cluster has the highest average education level.

Opportunists: The opportunists are the community's least active participants. Their social involvement is significantly lowest of all clusters. Their culinary interest is also significantly lower than that of the other clusters. They do not characterize themselves as profound culinary opinion leaders, nor as profound culinary opinion seekers. They score lowest with respect to offline and online culinary expertise. Compared with the functionalists, whose participation pattern is most similar, their main reason for becoming a member is not to

[24] This conclusion is drawn after examination of the reported motivations for becoming a community member (survey question 10) and the way respondents typify their visits (survey question 18). Compared to the other groups, the cluster of hobbyists has the largest percentage of respondents who report that the main reason for becoming a member is fun. Also, they typify their visits primarily as recreational, with the aim to relax. In contrast, the cluster of informants reports to be mostly concerned with retrieving information.

improve their culinary expertise, but to find recipes.[25] Presumably, cooking is for them not so much a hobby, than it is a (daily) chore. This makes this group distinctly different from the other clusters. Together with the hobbyists, their membership length is shortest compared with the other clusters. The respondents in this group have many years of Internet experience, but they are relative light Internet users. This cluster consists of a larger percentage of males than in the community in general. The average education level is high.

Table 6.10
Virtual community member types:
participation patterns and background variables*

Core Members (6%)	***Hobbyists (17%)***
Visits daily for about one and a half hours Focus: retrieve, supply, and discuss information Highly socially involved Longtime members Culinary opinion leaders Culinary experts in offline and online context Heavy Internet users Large percentage of seniors (40+) Education level lowest of all clusters	Visits 5-6 times a week for about one hour Focus: personal web page and guestbooks Socially involved Substantial percentage of seniors (40+) Education level is relatively low
Conversationalists (10%)	***Functionalists (28%)***
Visits 3-4 times a week for about half an hour Focus: discuss information Socially involved Mature members Most susceptible to normative interpersonal influence Culinary experts in offline context	Visits once a week for about half an hour Focus: retrieve information (recipes, articles, reviews) Not socially involved Education level highest of all clusters
Informationalists (14%)	***Opportunists (25%)***
Visits 3-4 times a week for about half an hour Focus: retrieve and supply information Socially involved Mature members Culinary experts in online context	Visits less than once a week for about 15 minutes Focus: retrieve information (recipes) Not socially involved No culinary opinion leaders and no opinion seekers No culinary experts in online context

* We have only reported the background variables that are most characteristic.

[25] Again, this conclusion is drawn after examination of the reported motivations for becoming a community member (survey question 10).

Table 6.10 summarizes the participation patterns and the most characteristic background variables of the six member types. Comparing our empirical-based typology to the conceptual virtual community member typologies of Kozinets (1999) and Kim (2000) yields several interesting insights. Kozinets discerns members on the basis of the dimensions social and topical involvement, which can be either high or low. Our sample of respondents indeed shows a considerable variance with regard to social involvement, ranging from a mean value of 1.5 for the opportunists to a mean value of 4.0 for the core members (measured on a rating scale from 1-5). However, they all report high topical involvement. Only the opportunists score significantly lower than the other member types, but their topical involvement still reaches a mean value of 3.8 (1-5 rating scale). This finding calls into question whether it is useful to discern community members on the basis of their topical involvement. If people are not interested in the community's topic of interest, they have no reason to join the community. Since Chapter 5 already made clear that topical involvement is not related to community influence on consumer decision-making, in contrast to social involvement that turned out to be an important explanatory variable, we may conclude that the relative difference in topical involvement among community members is too marginal to be meaningful.

Kim develops a member typology based on the idea of a membership life cycle that is characterized by successive stages of member involvement in the community. Our data do not allow us to examine if and in what order the community members, over time, move from one member type to the other. However, comparing the lengths of membership of the six member types can deliver some insight in such a life cycle development. The member types that have more recently joined the community are the opportunists, functionalists, and the hobbyists. The conversationalists and informationalists represent the segment of mature members, whereas the core members are longtime members. The profiles of the member types roughly fit Kim's characterization of increasing dedication to the community from the opportunists to the core members. Research by Alon et al. (2005) suggests that members become more socially involved in the community in the course of their membership. Also Walther (1995) has shown that Internet users progress from initially asocial information gathering to increasingly affiliative, social activities. Indeed, we find a small, significant correlation between social involvement and membership length (see Appendix B). Nevertheless, if we scrutinize the deducted stages of our member typology, we see that the novice hobbyists are more socially involved than the mature informationalists. This means that social involvement in the community is not simply a matter of time, but also of focus and attitude. This finding is in line with Utz's research results that indicate that MUD-players can be distinguished on the basis of their skepticism towards developing friendships online.

In the next paragraph, we will extend our typology to patterns of virtual community influence on the consumer decision process. In other words, the question is whether we can discern different patterns of community influence on decision-making for the various member types?

6.4 PATTERNS OF VIRTUAL COMMUNITY INFLUENCE ON THE CONSUMER DECISION PROCESS

In Chapter 5, we have examined to what extent membership characteristics, community interaction characteristics, and general consumer characteristics affect the influence of virtual community membership on the consumer decision process. In this chapter, we have focused specifically on community interaction characteristics. They are used as input variables for a classification of community members based on participation patterns. The resulting typology is further elaborated by relating the six member types to membership characteristics and general consumer characteristics. In the following paragraphs, we will study the relations between the six member types and community influence on the various stages of the consumer decision processes regarding cooking, restaurant visiting, and kitchen utensils buying. In contrast to the previous chapter, we now examine the joint effect of frequency of visits, duration of visits, and the extent to which members retrieve, supply, and discuss information, instead of determining the effects of these variables individually on community influence on the decision process. This offers practical advantages for marketers who want to use our typology to target community members. Based on insight in the relationships between member type and community influence on the decision process, they can target the most promising segments of members, i.e., the ones that are most likely to be influenced. In addition, they may adopt different marketing strategies for various groups of members, based on insight into which phases of the consumer decision process are most likely to be influenced by their community membership.

6.4.1 The Cooking Decision Process

The community under study is, in its core, a recipe exchange community. The database covers over 200,000 recipes versus 11,600 culinary articles, and 11,500 restaurant reviews. Recipes are used to guide the cooking process. Because of the plenitude and diversity of recipes, the community offers its members multiple opportunities for assistance regarding decisions about what to cook and how to cook it. As established in Chapter 5, the community is highly valued as a source of recipe information (see Table 5.13), and it has considerable influence on the cooking decision process of its members (see Table 5.7). But how does this

work out for the various member types? We have profiled the member types on the importance they attach to various sources of information with regard to cooking decisions, as well as the perceived community influence on the various phases of their cooking decision processes. Results are reported in Tables 6.11 and 6.12.

Table 6.11
Relative importance attached to various information sources for cooking decisions [a]

	Smul-Web[b]	**Family/ Friends**[b]	**Cook-books**[b]	**Papers/ Maga-zine**[b]	**TV/ Radio**[b]	**Internet sources**[b]
Core members	4.8	4.0	4.6	4.2	3.7	4.2
Conversationalists	4.5	3.9	4.4	4.0	3.3	3.7
Informationalists	4.7	4.1	4.5	4.1	3.6	3.7
Hobbyists	4.6	4.0	4.5	3.9	3.4	3.6
Functionalists	4.4	4.1	4.5	4.1	3.1	3.5
Opportunists	4.1	3.9	4.3	3.8	3.0	3.1
N=1007 Sample mean	4.4	4.0	4.4	4.0	3.2	3.5
F-statistic (p-value)	**22.2** (0.00)	1.5 (0.21)	1.5 (0.19)	**3.3** (0.01)	**7.5** (0.00)	**12.8** (0.00)

[a] The table contains unstandardized mean values and ANOVA results. F-values in bold are significant ($p \leq 0.05$).
[b] Values range from 1-5 (Statements, 1=no value; 5=a lot of value).

Table 6.11 informs us, not to our surprise, that core members attach significantly ($p < 0.00$) more value to SmulWeb as a source of recipe information than the opportunists. In line with their profile as culinary enthusiasts and opinion leaders, core members also value other sources highly. Especially other Internet sources are relatively much more valued by the core members compared with the other member types. The informationalists attach more value to SmulWeb as a source of information compared with the conversationalists, which is in line with their orientation on factual information and social interaction in the forums and chat rooms respectively. Contrary to what we would expect on the basis of their recreational-oriented profile, the hobbyists also value SmulWeb highly as source of information.

Although the functionalists, and especially the opportunists, attach less value to SmulWeb's reservoir of culinary knowledge compared with the other member types, their mean scores are still high. Note, however, that they attach more value to cookbooks, whereas all the other member types put SmulWeb in the first place.

Table 6.12
Member type profiles for community influence on the cooking decision process[a]

	Need recognition	*Search for information*	*Pre-purchase*	*Post-purchase*	*Overall influence*
	Perceived influence on cooking frequency[b]	**Perceived influence on recipe knowledge**[c]	**Perceived influence on recipe choice**[b]	**Perceived infl. on satisfaction with result**[b]	**Average overall infl. on 4 phases**
Core members	2.5	3.7	3.5	3.2	3.2
Conversationalists	2.8	3.5	3.5	3.1	3.2
Informationalists	2.6	3.6	3.5	3.2	3.2
Hobbyists	2.6	3.4	3.5	3.1	3.2
Functionalists	2.1	3.1	3.0	2.6	2.7
Opportunists	1.9	2.7	2.7	2.4	2.4
N=1007 Sample mean	2.3	3.2	3.1	2.8	2.9
F-statistic (p-value)	**10.8** (0.00)	**21.1** (0.00)	**12.3** (0.00)	**12.1** (0.00)	**20.2** (0.00)

[a] The table contains unstandardized mean values and ANOVA results. F-values in bold are significant ($p \leq 0.05$).
[b] Values range from 1-5 (Statements, 1=strongly disagree; 5=strongly agree).
[c] Values range from 1-5 (Evaluation, 1=no influence; 5=a lot of influence).

Table 6.12 informs us in two ways about differences in community influence patterns on the cooking decision process. In the first place, it enables us to scrutinize differences in community influence between the member types. Secondly, it also displays differences within the member types regarding varying levels of community influence per phase of the decision process. If we first focus on the differences between the member types and we take the overall influence on the four phases of the cooking decision process into account, we notice that four member types score above the mean and two member types score below the

sample mean of 2.9. This means that community influence on the cooking decision process is most profound for the core members, the conversationalists, the informationalists, and to a somewhat lesser extent for the hobbyists. Community influence is much smaller for the functionalists, and it is especially small for the opportunists. The two last member types score significantly ($p < 0.01$) lower than the other member types regarding overall community influence on the four phases of the cooking decision process. Considering the fact that the functionalists and opportunists attach less importance to the community as a source of recipe information, and the fact that they are the least active participants in the community in terms of visit frequency and duration, as well as the extent to which they retrieve, supply, and discuss information, this is not a surprising finding.

If we scrutinize the differing levels of community influence within member types per phase of the cooking decision process, then we find that for most member types the influence pattern does not differ from the general pattern in the entire sample; i.e., community influence is most profound with respect to the information search and pre-purchase evaluation phases. For the core members, informationalists, conversationalists, and opportunists, we do not find a significant ($p \leq 0.05$) difference in the level of community influence between these two phases. For the hobbyists and the functionalists we do find a significant ($p < 0.05$) difference between the level of community influence on search for information and pre-purchase evaluation. The hobbyists experience most community influence in the pre-purchase evaluation phase, whereas the functionalists are most profoundly influenced with respect to their search for information in the context of making cooking decisions. In general, community influence is least profound in the phase of need recognition. This pattern is found for all member types. The conversationalists, however, experience a relative strong influence on need recognition with respect to the other phases if we compare this group with other member types.

Overall, we may conclude that we find small, but meaningful differences between and within member types regarding community influence on the various phases of the cooking decision process. In line with the results found in Chapter 5, it is especially the groups that are characterized by a high frequency of visits, and/or a high extent of retrieving information, that experience most community influence on their cooking decision processes. Additional factors that significantly affect the extent of community influence are the level of social involvement and susceptibility to normative interpersonal influence (see Section 5.6). Again, either one or both of these factors are found to be characteristic of the groups that score above the sample mean on community influence on their cooking decision processes. Finally, also the level of importance attached to SmulWeb as a source of recipe is associated with the level of perceived influence on cooking decisions.

Differences within the member types with respect to community influence per phase of the cooking decision process can be explained in light of the factors that we found to be most strongly related to community influence in a particular phase. Susceptibility to normative interpersonal influence is most strongly related to community influence in the phase of need recognition (see Section 5.6). Since conversationalists score highest on this characteristic, it is no surprise that we find a relative profound impact on need recognition for this group. Similarly, the extent to which members retrieve information from the community is most strongly related to perceived influence in the information search phase. The functionalists are much more extensively engaged in retrieving information form the community compared with the opportunists. Consequently, we find that the functionalists report a significant ($p < 0.01$) higher level of community influence on search for information compared with the opportunists. To conclude, frequency of visits is most strongly related to community influence in the pre- and post-purchase evaluation phase. Next to the core members, the hobbyists are the most regular visitors of the community. The extent to which they retrieve information from the community is relatively low, though. This explains why they score significantly higher on community influence in the pre-purchase evaluation phase compared with the information search phase.

6.4.2 The Restaurant Visiting and Kitchen Utensils Buying Decision Processes

Community influence patterns of the various member types might depend on the decision process at stake. In Chapter 5, we have found that the levels of community influence, and the factors related to it, differ between the decision processes regarding cooking, restaurant visiting, and kitchen utensils buying. Restaurant visit and kitchen utensil purchase decisions are less affected by community membership compared with cooking decisions. Besides, community influence on the restaurant visiting and kitchen utensils buying decision process occurs mostly with respect to the information search phase. The other phases of the decision processes are hardly affected (see Table 5.12). The factor that best explains community influence on these two decision processes is the extent to which members retrieve information from the community (see Section 5.6). Taking this background information into account, we set out to examine the community influence patterns of the six member types for decision-making regarding restaurant visits and kitchen utensil purchases.

For both decision processes, we have reduced our sample to include only those respondents that reported to have been confronted with either decision within a reasonable time period prior to the date the survey was issued. Thus, our restaurant sample contains 630

respondents, and our kitchen utensils sample consists of 400 respondents.[26] We have applied our cluster solution to the two reduced samples. The percentage of members per cluster in the reduced samples is similar to that of the full sample. First, we have examined what level of importance the member types attach to various information sources for restaurants and kitchen utensils. Subsequently, we have profiled the six member types on the unstandardized variables representing perceived community influence on the restaurant visiting and kitchen utensils buying decision processes. Results are reported in Tables 6.13-16.

Table 6.13
Relative importance attached to various information sources for restaurant decisions [a]

	Smul-Web[b]	**Family/ Friends**[b]	**Rest. guides**[b]	**Papers/ Maga-zines**[b]	**TV/ Radio**[b]	**Internet sources**[b]
Core members	3.8	4.1	3.1	3.2	3.1	3.1
Conversationalists	3.7	4.3	3.1	3.4	3.0	3.1
Informationalists	4.0	4.5	3.2	3.6	3.0	3.2
Hobbyists	3.5	4.1	3.1	3.1	2.8	2.8
Functionalists	3.3	4.5	3.0	3.4	2.8	2.9
Opportunists	2.5	4.2	2.6	3.2	2.3	2.4
N=630 Sample mean	3.3	4.3	2.9	3.3	2.7	2.8
F-statistic (p-value)	**36.9** (0.00)	**4.5** (0.00)	**5.6** (0.00)	**3.0** (0.01)	**8.9** (0.00)	**8.6** (0.00)

[a] The table contains unstandardized mean values and ANOVA results. F-values in bold are significant ($p \leq 0.05$).
[b] Values range from 1-5 (Statements, 1=no value; 5=a lot of value).

[26] For the restaurant decision process we have included only those respondents whose most recent restaurant visit took place no longer than a month prior to the date of filling out the survey. For including respondents in the kitchen utensils sample, we used the threshold of six months prior to filling out the survey, in which period at least one kitchen utensils purchase should have occurred.

Table 6.14
Relative importance attached to various information sources for k.u. decisions [a]

	Smul-Web[b]	Family/ Friends[b]	Bro-chures[b]	Papers/ Maga-zines[b]	TV/ Radio[b]	Internet sources[b]
Core members	3.4	4.0	3.3	3.5	3.2	3.4
Conversationalists	3.3	3.9	3.3	3.7	3.2	3.3
Informationalists	3.4	3.8	3.3	3.7	3.3	3.2
Hobbyists	3.3	3.9	3.2	3.5	3.0	3.0
Functionalists	2.9	3.8	3.2	3.6	3.0	2.9
Opportunists	2.3	3.5	2.8	3.3	2.7	2.5
N=400 Sample mean	3.0	3.8	3.1	3.5	3.0	2.9
F-statistic (p-value)	**28.4** (0.00)	**3.9** (0.00)	**6.3** (0.00)	**2.7** (0.02)	**4.3** (0.00)	**9.8** (0.00)

[a] The table contains unstandardized mean values and ANOVA results. F-values in bold are significant ($p \leq 0.05$).
[b] Values range from 1-5 (Statements, 1=no value; 5=a lot of value).

If we consider the relative importance attached to SmulWeb as a source of restaurant (Table 6.13) and kitchen utensils information (Table 6.14), it is interesting to compare the order of importance for the various information sources per member type. With respect to restaurant decisions, all member types first turn to their family and friends for information. Next, the core members, conversationalists, informationalists, and hobbyists value SmulWeb best, wheareas the functionalists and opportunists prefer magazines and papers. In the case of kitchen utensils decisions, all member types again value their family and friends most as sources of information. After that, all member types attach most importance to magazine and papers. For the core members, conversationalists, informationalists, and hobbyists, SmulWeb takes in the third place. However, functionalists and opportunists put SmulWeb in the last place after brochures, television and radio, and other Internet sources. Although the differences in reported values are not huge, the tendency clearly shows that the community is more salient as an information source among other sources for those member types that contribute to the community's content.

If we examine the results for the overall influence on the four phases of the decision processes concerning restaurant visiting (Table 6.15) and kitchen utensils buying (Table 6.16), we find, in both cases, a pattern similar to the cooking decision process. The core members, conversationalsists, informationalists, and hobbyists score above the sample mean, whereas the functionalists and the opportunists score below the sample mean. However, in contrast to the cooking sample, the differences between the member types scoring above the mean and the member types scoring below the mean are not overall significant. Thus, we find that community influence on restaurant visit and kitchen utensil purchase decisions diverges less between the member types compared with community influence on cooking decisions. Presumably, this is caused by the fact that variables such as frequency of visits and social involvement, which are important distinguishing characteristics of the member types, are not related to community influence on decisions regarding restaurant visits and kitchen utensils purchases (see Section 5.6).

Table 6.15
Member type profiles for the restaurant visiting decision process[a]

	Need recognition	*Search for information*	*Pre-purchase*	*Post-purchase*	*Overall influence*
	Perceived infl. on rest. visit frequency[b]	**Perceived infl. on restaurant knowledge**[c]	**Perceived infl. on restaurant choice**[b]	**Perceived infl. on satisfaction with visit**[b]	**Average overall infl. on 4 phases**
Core members	1.7	2.5	1.9	1.9	2.0
Conversationalists	2.0	2.9	2.1	2.0	2.2
Informationalists	1.7	3.0	1.9	2.0	2.1
Hobbyists	1.3	2.6	1.7	1.7	1.8
Functionalists	1.3	2.3	1.5	1.5	1.6
Opportunists	1.2	1.8	1.3	1.2	1.4
N=630 Sample mean	1.4	2.4	1.6	1.6	1.7
F-statistic (p-value)	**14.6** (0.00)	**16.7** (0.00)	**9.4** (0.00)	**10.3** (0.00)	**18.3** (0.00)

[a] Unstandardized mean values and ANOVA results. F-values in bold are significant ($p \leq 0.05$).
[b] Values range from 1-5 (Statements, 1=strongly disagree; 5=strongly agree).
[c] Values range from 1-5 (Evaluation, 1=no influence; 5=a lot of influence).

Table 6.16
Member type profiles for the kitchen utensils buying decision process[a]

	Need recognition	*Search for information*	*Pre-purchase*	*Post-purchase*	*Overall influence*
	Perceived infl. on k.u. purchase frequency[b]	**Perceived influence on k.u. knowledge**[c]	**Perceived influence on k.u. choice**[b]	**Perceived infl. on satisf. with purchase**[b]	**Average overall infl. on 4 phases**
Core members	1.3	2.1	1.5	1.8	1.7
Conversationalists	1.8	2.4	1.7	1.7	1.9
Informationalists	1.6	2.4	1.8	1.7	1.9
Hobbyists	1.3	2.3	1.6	1.7	1.7
Functionalists	1.3	2.1	1.4	1.4	1.6
Opportunists	1.1	1.6	1.2	1.2	1.3
N=400 Sample mean	1.4	2.1	1.5	1.5	1.6
F-statistic (p-value)	**5.5** (0.00)	**4.7** (0.00)	**4.1** (0.00)	**3.8** (0.00)	**6.4** (0.00)

[a] The table contains unstandardized mean values and ANOVA results. F-values in bold are significant ($p \leq 0.05$).
[b] Values range from 1-5 (Statements, 1=strongly disagree; 5=strongly agree).
[c] Values range from 1-5 (Evaluation, 1=no influence; 5=a lot of influence).

If we scrutinize the differences in community influence within the member types per phase of the restaurant visit and kitchen utensils purchase decision processes, we find that for all member types community influence is significantly ($p \leq 0.05$) highest with respect to the information search phase. This is in line with the general pattern of community influence on these two decision processes in the entire sample. Only for the core members, there is no significant difference between community influence on search for information and post-purchase evaluation with respect to the kitchen utensils decision process. This means that community influence on their kitchen utensils buying decision process particularly manifests itself through both an increased level of knowledge about kitchen utensils as well as an increased level of satisfaction with their kitchen utensil purchases.

Overall, we find few significant differences between the levels of community influence between and within the member types. We should keep in mind that, in general, the level of

community influence on the restaurant visiting and kitchen utensils buying decision process is really not very profound at all. Therefore, the community influence patterns described above are based on differences that might entail limited meaning for practical marketing purposes.

6.5 DISCUSSION AND CONCLUSION

6.5.1 Picturing the Constellation of Member Types

To date, the most widely used typology of virtual community members distinguishes between lurkers, i.e., members who only read posts, and posters, i.e., members who make contributions to the community's content. The lurker-poster dichotomy could be compared with the most extreme clusters of our classification. The opportunists only take information for personal gain without showing any reciprocity in their behavior. This translates to the lurker, whose label has a negative connotation. In contrast, the core members nurture the community by contributing information and investing in relationships. They are the ultimate posters/contributors. However, we find that in between these two opposites a range of other member roles may be discerned. Informationalists hardly engage in community forums and chat rooms, but they actively retrieve and supply information. Conversationalists, on the other hand, participate to a relative high extent in the discussion forums and chat rooms. In this respect, they resemble the core members. However, they score lower on culinary opinion leadership and expertise. The functionalists have a participation pattern that is similar to the opportunists. The major difference is the motivation for their community membership. Functionalists want to improve their culinary expertise and to that extent they retrieve quite some information in the form of recipes, articles, and reviews. Opportunists are merely interested in retrieving recipes from time to time. The hobbyists form yet another distinct group of community members. Their membership is mostly characterized by their regular and extended community visits during which they focus relatively strongly on activities that entail playing around with technical functionalities.

The interesting question is what we can learn from our classification of six member types as opposed to the dichotomy of the two extremes, i.e., lurkers vs. posters? Compared with the simple dichotomy, our classification of six member types gives a more realistic insight in the diverse ways members make use of a virtual community as a source for information, socialization, recreation, and entertainment. We have demonstrated that this translates into specific profiles of the member types in terms of membership characteristics and general consumer characteristics. Besides, we have found that the member types attach

different levels of importance to the community as a source of information, and that they are related to differing levels and patterns of community influence on consumer decision-making regarding consumption experiences that are central to the community's topic of interest. But what does this mean for community managers and marketers?

Let us consider Figures A and B, which are two different illustrations of a virtual community's member constellation. Figure A consists of an inner circle and an outer circle. This is the classic depiction of the lurker-poster dichotomy. Posters can be found in the core, whereas lurkers are found in the periphery. Thus, in terms of our typology, we find the functionalists and the opportunists in the outer circle, because these member types hardly supply the community with information. We find the other member types in the inner circle, since they are the ones who make all sorts of contributions. This depiction blurs all the differences between the member types apart from whether they are contributors or not.

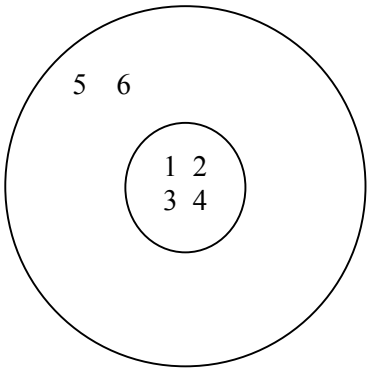


Figure A

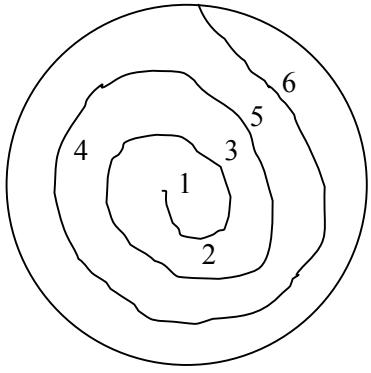


Figure B

1 = core members; 2 = conversationalists; 3 = informationalists; 4 = hobbyists;
5 = functionalists; 6 = opportunists

In contrast, Figure B allows the representation of (some of) these differences. Note that the core in Figure B does not consist of one insulated group as in Figure A, in which a small group of posters is surrounded by a large group of lurkers. Rather, the core is an open space with no clear boundaries. Contributing to the community's knowledge reservoir does not automatically make members part of the community's core as in the case of the lurker-poster dichotomy. It is only when members are truly immersed, i.e., when they invest a profound portion of their energy and time in various aspects of community life, such as giving and taking information, as well as bonding with other members, that they belong to the community's core members. The conversationalists, informationalists, and hobbyists circle around the core members. All these member types are socially involved in the community.

The conversationalists and informationalists are put a bit closer to the core than the hobbyists, because they have been community members for a longer time and they are also to a larger extent involved in retrieving and supplying information. The functionalists and the opportunists are put in the community's periphery. These member types are not socially involved, they hardly make any contributions, and (together with the hobbyists) they are relatively novice members. The opportunists, who merely come to retrieve recipes, are put further from the community's core than the functionalists, who have a genuine interest in increasing their culinary expertise.

If we relate the six member types to the interview excerpts from the beginning of this chapter, we notice that, in the course of her membership, Julia has taken up various member roles in the community: "I subscribed as a member in the summer of 2001, because I liked to use the recipe database. At that time I had no idea of all the things that you could do on the SmulWeb sites. I had not a clue that it actually was a virtual community." Thus, Julia first acts as an opportunist, who is merely interested in retrieving recipe information. However, soon she starts supplying information herself, becoming an informationalist: "I started with adding one recipe and I really liked it that it appeared on my personal SmulWeb page. So, I entered more recipes to the database." Then, she becomes interested in activities that go beyond information exchange between the members: "I started to surf around to see what else I could do. I visited other members' personal pages that were decorated with illustrations and other things. And I thought that it would be very nice to dress up my own personal page." Here, she describes the participation profile of the hobbyist, who is occupied with technical functionalities.

Bit by bit, Julia immerses herself in the SmulWeb community. She actively participates in the community's discussion forums during a spare half hour at work, while she submits recipes, reviews and articles from her home computer on a regular basis. In two and a half years time, she has supplied the community with 89 recipes, 88 restaurant reviews, 41 articles about food and cooking, 19 food product reviews, and 9 shopping tips. Her personal guest book contains more than 7,600 messages from other SmulWeb members.[27] Nowadays, she can indeed be labeled one of the community's core members, being a frequent visitor and "online all day long", who has profound culinary expertise and shares this with the community, who takes advantage of the knowledge of others by reading their contributions, and who maintains strong social relationships with other members.

[27] These numbers were taken from Julia's record displayed on her SmulWeb page on November 28, 2003.

This example underscores the dynamic nature of community membership that is characterized by shifts in focus and an evolving pattern of participation. During her membership, Julia has moved from the periphery to the community's core, thereby taking up various member roles. Presumably, one day Julia will move away from the inner parts of the community, decreasing the number of contributions and spending less and less time discussing and retrieving information, up to the point where she eventually ceases her participation altogether (cf., Alon et al. 2005). The circling line within Figure B depicts this dynamic; the position of the member types roughly represents in which order members move from one role to the other. In contrast, the lurker-poster dichotomy results in a static representation of community membership consisting of two closed circles: insight in how community membership evolves in terms of focus of participation, frequency and duration of visits, social involvement, and length of membership is lost.

Our member type constellation is in line with Kim's conceptualization of progressive stages of community membership that moves from visitors, to novices, to regulars, to leaders, and to elders. This last group has already given up central stage and is slowly moving towards the periphery again (Kim 2000). Kim bases her membership life cycle on membership length connected with increasing levels of involvement in the community. Our member type constellation makes clear that we can specify Kim's generic label of involvement to the amount of participation, the amount of reciprocal behavior in terms of contributions to the community's content (supplying and/or discussing information), as well as the level of social involvement. Moreover, we have found that the member types closer to the center attach more importance to the community as a source of information compared with the ones in the periphery. To push it even a bit further, our member type constellation allows us to specify three characteristic orientations of member involvement in the community (see Figure C).

We distinguish between a factual, interactional, and recreational orientation that are respectively depicted by a discontinuous line, a continuous line and a dotted line. The core members are found in the overlap between all three lines, combining a factual, interactional, and recreational orientation. The opportunists, functionalists, and informationalists share a preference for factual information in the form of recipes, reviews, and articles. Conversationalists stand out for their participation in the community's forums and chat rooms, thus their orientation can be labelled interactional. The hobbyists are characterized by their recreational orientation aimed at playing around with technical functionalities. The representation in Figure C instantly shows, for example, that the regulars, i.e., the informationalists and the conversationalists, might share a similar level of involvement in the community, but that the orientation of involvement differs significantly. Thus, it adds nuance to Kim's conceptualization of the membership life cycle. In the next paragraph, we will set

out how marketers may benefit from the insights that can be retrieved from our member type constellation.

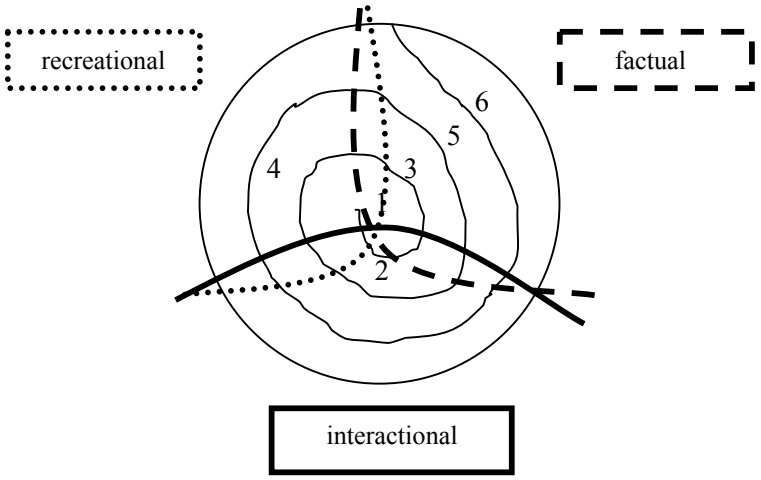


Figure C

1 = core members; 2 = conversationalists; 3 = informationalists; 4 = hobbyists;
5 = functionalists; 6 = opportunists

6.5.2 Strategies to Address the Various Member Types

Marketers interested in using the community as a marketing tool can use our member typology to locate those members that are most likely to be influenced by the community. The exchange of information is most dense in the community center and the social spaces directly surrounding the center. There we find the member groups that supply and retrieve information to the highest extent, i.e., the core members, conversationalists, informationalists, and hobbyists. Consequently, it is also these groups that are most profoundly influenced in their decision-making by their community membership. They take an active part in the virtual community as a reference group, which increases its value as a source for information. Because members of these groups tend to maintain social relationships with one another, interpersonal influence becomes stronger (cf., Johnson Brown & Reingen 1987). In contrast, the functionalists and the opportunists are located further away from the community center. They hardly contribute to the community's knowledge reservoir, but consume what the other member groups have supplied. Because of their weaker social tie to the community, as well as their weaker intensity of participation, they experience less

interpersonal influence from the community and, as a result, they are to a lesser extent affected in their decision-making process.

So far, we could also have used Figure A, the classical lurker-poster dichotomy, to describe the information flows within the community. However, Figure C enables us to explain the pattern in more detail and it allows us to come up with various marketing strategies that fit with the profile and the particular way each member type participates in the community. The core members can be found in the middle of all member groups. They are the community's ultimate experts. Presumably, they are mostly influenced by other core members in their decision-making, because it is only these members that match their culinary expertise. To reach the core members, marketers have to catch their attention with new products, product improvements, culinary services, and cooking appliances that offer added value to their existing level of expertise and experience. An interesting note is the fact that the core members have a significant lower education level than the other member types. Marketers might want to keep this in mind when developing a communication strategy aimed at experts. Since the core members focus on the factual, interactional, as well as the recreational aspects of the community, it doesn't really matter in what form marketers address them, but they should aim at them directly. Information and practices that reach them through the other member groups might be discarded as unworthy for true experts and opinion leaders.

If we look at the conversationalists and informationalists, we see that the main focus of their community membership is different. This means that it is also likely that the two groups are differently influenced by their community membership. The informationalists focus on direct information retrieval in the form of recipes, reviews, and articles. The conversationalists focus, in addition, on social interaction within the community's forums and chat rooms. Among all member types, the conversationalists are most susceptible to normative interpersonal influence. The conversationalists are likely to take an interest when people talk about a product, restaurant, or kitchen utensil, and when they can join in the conversation. Therefore, to reach the conversationalists, marketers could create a buzz within the community that is spread by the core members and conversationalists in the community's discussion forums. To reach the informationalists, marketers should supply the community with factual information that could take the form of background articles about products or utensils, recipe suggestions, and company websites within the community. Informationalists are likely to access this information directly or they are likely to be made indirectly aware of it through information exchange with the core members and other informationalists.

The hobbyists take up a special position within the constellation of member types. They belong to the community's inner circle, but are not as close to the core as the conversationalists and informationalists. This is the result of their shorter-time membership

length and the fact that they focus especially on the recreational aspect of the community. They retrieve less information compared with the functionalists. However, because of their stronger social tie to the community and their active and frequent participation in the community, it is more salient to them as a reference group and they are to a higher extent influenced by it in their decision-making. To reach the hobbyists, marketers could organize a contest in the community. This will appeal to their aim for relaxation and recreation, while at the same time informing them about a product or a company.

The functionalists and the opportunists are important groups for community managers and marketers alike. After all, together they form half of our respondent sample. Although they can be found at the community's periphery, one day they may be part of the community's core. Retaining these groups as members of the community is, therefore, imperative for a viable community life cycle. Besides, they are the community's audience that takes in at least some of the information that is being communicated within the community. Moreover, in terms of Granovetter's theory on the strength of weak ties, these two member groups serve as bridges over which information flows from one clique to the other, i.e., from the community of culinary experts to the broader community of ordinary, everyday cooks and consumers (Granovetter 1973). They can be reached through all of the other member groups, but especially through the core members and the informationalists, since they share their informational focus. The difference between the two groups is their enthusiasm for expanding their culinary knowledge. Functionalists are interested in this; they actively seek information and spent weekly about half an hour browsing the community's websites. The opportunists focus on ad hoc recipe retrieval. They go in, get a recipe, and leave the community within 15 minutes. Consequently, the group of functionalists is probably more susceptible to marketer-generated and commercial information than the opportunists. Given the fact that the functionalists have less culinary knowledge than the core members and informationalists, marketers could try to address them directly with information that caters to their expertise and experience.

6.5.3 Concluding Remarks

Our classification of community members is based on the results of a survey in one specific community. This limits the generalizability. It could very well be that in other communities not all six member types can be found. Communities that are organized around serious subjects concerning, for example, health issues, are less likely to contain members who focus on recreational activities such as playing around with technical functionalities. The percentage of highly socially involved members might also be much larger compared with the community under study, since these types of communities tend to create strong emotional bonds between the members (Laing et al. 2004). It is also not inconceivable that more, or

other, classes of members can be found in other types of virtual communities. Compare in this respect Mathwick's typology of the different players in Multi-User-Dungeons. Thus, our typology should not be taken normatively. Rather, we have tried to offer a broader and deeper understanding of the various segments that can be discerned between members if one takes a bit more than the most basic active-passive distinction into account.

We have focused on classification variables that can be observed with participation pattern tracking software. This is an advantage over existing member typologies for which information about individual traits or attitude measures are necessary. Marketers who automatically record the participation behavior of community members can update the classification of community members regularly to keep track on changing patterns. This is important for delivering relevant services to the various member groups. Kim describes five actions that community managers should undertake to meet the needs of the member roles that she has distinguished, i.e., welcome your visitors, instruct your novices, reward your regulars, empower you leaders, and honor your elders (Kim 2000, p. 116). Kim refrains from describing how the various member roles can be tracked down. Our classification, based on clear participation patterns, offers a starting point for community managers to gain insight in the composition of the member database. This may help determining community management strategies, e.g., developing a fast search functionality to facilitate usage of the community's knowledge reservoir by the functionalists and opportunists. Similar to the member roles proposed by Kim, the six member types are no static entities. Thus, community management strategies need to be updated when members progress from one type to the other. For example, if many functionalists turn into hobbyists (compare Julia's membership life cycle), then the community's server(s) might need extra capacity to support loading of large music and image files.

In this study, we have based our results on self-reports retrieved by means of an online survey. This leads to two drawbacks. In the first place, we have not captured all community members, thus we might have over- or underestimated the relative sizes of the clusters. After all, our sample is somewhat biased towards the most enthusiastic and loyal community members (see Chapter 4). In the second place, self-reports are less accurate than actual online behavior. The advantage of our method is that it enabled us to relate the member types to reports of perceived community influence on three decision processes. An obvious avenue for further research would be to arrive at a classification based on records of actual online behavior, and compare results with our classification based on survey data.

Furthermore, future research could make a more refined distinction between the activities undertaken while members visit the community. The hobbyists stand out, because they are not so much involved in retrieving, supplying, and discussing information, but

because they engage (also) in other types of activities. Systematic insight in more encompassing participation patterns, including activities such as maintaining a personal web page, enables marketers and community managers develop more specific and targeted strategies that meet the needs of the varied member database.

Taken the limitations and avenues for further research into account, the main take-aways of this chapter can be summarized as follows:

1. Our member typology is based on five behavioral dimensions that capture the frequency and duration of member visits, as well as the extent to which they are engaged in retrieving, supplying, and discussing information. Going beyond the simplistic lurker-poster dichotomy that is only based on contribution behavior, we distinguish between six member types that differ significantly with respect to their participation pattern, as well as key membership characteristics and general consumer characteristics. Insight in these differences enables marketers to make more informed and strategic decisions about which member segments to target and how to target them.
2. The member types can be put in an imagined circle that represents the community. Core members (6%) are in the center. The next ring contains conversationalists (10%), informationalists (14%), and hobbyists (17%). Functionalists (28%) and opportunists (25%) are located at the periphery. Closer to the center means a higher level of participation, a higher level of information retrieval, supply, and discussion, a higher social involvement, a longer membership length, and also a higher level of community influence on decision-making.
3. The circle contains three spheres of orientation; opportunists, functionalists, and informationalists are oriented towards facts. Conversationalists are oriented towards interaction. Hobbyists are oriented towards recreation. Core members combine the three orientations. These orientations add nuance to the dynamic circle representation highlighting that member involvement in the community does not just simply increase towards to core, but that form and focus of the involvement differ between member types.

Now that we have gained insight in the various member types that can be discerned within the community, we turn our focus to the most dedicated, and in a sense the most valuable, member group, i.e., the core members. Because of their extensive participation, this group of members plays an important role in defining the community's character and content. Because of their central stage in the community, their involvement in sharing information, and their

culinary opinion leadership, core members determine to a large extent the valence of the community as a reference group. To truly understand the process of interpersonal influence within online communities, it is necessary to examine what the core members communicate to the community and how they communicate it. Therefore, in the next chapter, we take up the method of netnography to study ongoing member discussions within the community's forums. We will investigate what topics are addressed, how they are addressed, and in what ways the discussants influence each other. Because forum contributions mainly come from core members and conversationalists, it allows us to peek into the community's central character and content and learn about the norms, values, perceptions, and attitudes that underly consumer decision-making about the community's topics of interest.

Chapter 7

Frames of Discussion in Virtual Community Forums
A Netnography of SmulWeb

"*For tracking the marketing-related behaviors of online communities, netnography is a stand-alone method. It is a way to understand the discourse and interactions of people engaging in computer-mediated communication about market-oriented topics.*"
(Kozinets 2002a, p. 64)

7.1 INTRODUCTION

In the previous two chapters, we have reported the results of a large-scale survey among members of a virtual community about the role of the community in their decision-making processes, as well as their online participation behavior. We have gained a better understanding of the way consumers value and use virtual communities as a medium to share information with other consumers. However, what still lacks, is a deeper understanding of that what is being shared in these communities. Information can be exchanged in various ways. In the community under study, members contribute recipes, reviews, articles, tips, and they engage in forum discussions and chat sessions. This chapter will focus on online forum discussions, because their unique and expressive content allows us peek unobtrusively into actual word-of-mouth communication and ongoing interpersonal influence in its naturalistic and real-time setting.

The six SmulWeb forums generate, on average, a total of 230 postings daily. These postings contain a wealth of information about the tastes, desires, symbol systems and decision-making influences of the discussants. Thus, they offer academics and marketers an unprecedented opportunity to look beyond consumer preferences and buying behavior and gain deeper insight in how consumers form perceptions and make decisions about consumption activities, and, in particular, how these processes are influenced by interaction with other consumers. Because of the prominent input of the core members in the forums, monitoring and analyzing the discussions gives us insight in the knowledge, attitudes, and behaviors of an influential member segment. After all, their abundant contributions to the community's knowledge reservoir reach a large group of members that turn to the community for information and advice.

In this chapter we apply the method of netnography to study online forum discussions. This method is described by Kozinets in the following way: "Netnography, or ethnography on the Internet, is a new qualitative research methodology that adapts ethnographic research techniques to study the cultures and communities that are emerging through computer-mediated communications. As a marketing research technique, netnography uses the information that is publicly available in online forums to identify and understand the needs and decision influences of relevant online consumer groups" (Kozinets 2002a, p. 62). Three questions have formed the starting point of our netnography. What topics do the forum participants address? How are their discussions shaped? And what tactics do they use to influence each other? Our overall objective is to present an illustration of online discussion practices, and to point out what marketers may learn from tracking and analyzing the forum participants' discourse about cooking and eating.

This chapter is organized as follows. Section 7.2 describes the conceptual foundations of our netnography, i.e., ethnographic research into consumer communities and research into consumer value systems. In Section 7.3, we discuss the netnographic research methodology in general and the specific structure of our fieldwork in particular. The results of the netnography are presented in Section 7.4. Finally, Section 7.5 contains a discussion of the main findings.

7.2 CONCEPTUAL FOUNDATIONS

7.2.1 Ethnographies of Consumer Communities

Among marketing and consumer behavior researchers, interest in studying contemporary consumer communities has increased greatly since the 1990s (Sherry 1995). What underlies this trend is a growing recognition that, to better understand consumer behavior, insight is needed in the way people give meaning to their lives by committing to social activities and interpersonal relationships based on a shared interest in a particular product class, brand or some type of consumption. Instead of explaining consumption choices in terms of ethnicity, gender, age, or social class, consumer behavior is increasingly examined in terms of consumption-oriented microcultures, or tribes, that each exhibit distinct patterns of socially shared meanings and practices (Thompson & Troester 2002). The methodologies used to study consumer communities are mostly derived from the anthropological research tradition. Especially the ethnographic research method has proven valuable to understand how people define themselves by means of consumer goods and consumption patterns (e.g., Celsi, Rose & Leigh 1993; Schouten & McAlexander 1995; Kozinets 2001, 2002b; Muniz & O'Guinn 2001; Cova & Cova 2001). In order to position our netnography of a virtual community in

this stream of research, we need to address two issues: the concept of consumer community and the advent of computer-mediated environments that both support existing, real life communities as well as create new, virtual ones.

Because of the raised interest in the cultural analysis of consumption meanings, various concepts of consumer community have entered the field of academic marketing research. Schouten and McAlexander (1995) have introduced the concept of the subculture of consumption. Characteristics of such a subculture include an identifiable, hierarchical social structure, a set of shared beliefs and values, and unique jargons, rituals and modes of symbolic expression (Schouten & McAlexander 1995, p.43). Their study of Harley-Davidson motorcycle owners presents the subculture of consumption as a way of life that often deviates to some extent from the broader cultural background. Members of the subculture acculturate from outsiders to insiders; this entails an evolution of motives for involvement and a deepening commitment to the subculture and its ethos.

In line with Schouten and McAlexander's study of the Harley-Davidson-oriented subculture of consumption, Muniz and O'Guinn (2001) focus on consumer communities organized around specific brands (i.e., Ford Bronco, Macintosh, and Saab). Community markers include consciousness of kind, shared rituals and traditions, and a sense of moral responsibility. However, they contrast their concept of brand community with the subculture of consumption by pointing to its embeddedness in a commercial and mass-mediated ethos that embraces the surrounding culture's ideology rather than rejecting it. Moreover, in their conceptualization of brand communities, members actively negotiate the meaning of the brand they admire, instead of adhering to a socially fixed meaning that is passed on from member to member as in the case of the Harley-Davidson biker community (Muniz & O'Guinn 2001, p. 414). Despite some differences, these two conceptualizations of consumer community both put forward the cohesion among members, in terms of a commonly shared identity and unifying rituals and traditions, as the most important characteristic of community.

Kozinets (2001) comes up with the concept of a culture of consumption that is focused on brand-related consumption activities. Thus, he abandons the prefix sub, which in the context of subculture implies a shared identity. This conceptualization of consumer community explicitly acknowledges heterogeneity among members of ostensibly homogeneous consumer groups. In his study of Star Trek fan clubs, Kozinets focuses on the dynamic connection, disconnection, and reconnection of social meaning and practice to the Star Trek culture of consumption by various social actors and institutions (Kozinets 2001, p. 71). He describes the existence of several Star Trek subcultures and microcultures that are characterized by distinctive consumption practices and meanings each emphasizing different aspects of Star Trek's texts, images, and objects. Although part of a larger whole, these

microcultures do not necessarily interact with each other. In fact, because particular paths of consumption meanings and practices coincide with collective identifiers such as gender, age, religion, sexual orientation, and social class, Star Trek microcultures develop rather independent of one another.

The community under study differs from the previous conceptualizations in two ways. First of all, SmulWeb is not organised around one specific product class, brand, or consumption activity. Its topic of interest is broadly defined as culinary matters, which include, among others, cooking, eating, drinking, collecting recipes, restaurant visiting, purchasing kitchen utensils and appliances, and grocery shopping. Since the topic of food, and everything that is related to it, concerns all people, the scope of this consumer community is much larger than the brand communities and (sub)cultures of consumption studied so far. In line with Kozinets' culture of consumption, SmulWeb can be characterized as a consumer community that encompasses various heterogeneous consumer groups. But unlike the Star Trek culture of consumption in which microcultures exists separate from one another, the site of our study functions as a platform that brings together all these different consumer groups. Therefore, SmulWeb offers a unique opportunity to examine the interactions between these groups.

An important characteristic of these interactions is that they mainly occur online. Although real life relationships between various members exist and a community gathering is organized once a year, most members have never met face-to-face. Muniz and O'Guinn (2001) as well as Kozinets (2001; 2002b) include in their ethnographies an exploration of virtual interactions between the members of the consumer communities they study. However, the online brand communities, fan websites, and computer-mediated newsgroups are virtual counterparts of existing, real life consumer groups. They are studied as online research sites next to the ethnographic fieldwork that is undertaken in offline environments. Of course, SmulWeb also has real life counterparts, like cooking clubs, culinary societies, wine courses, food fares, and circles of professional cooks. Nevertheless, we limit our study to SmulWeb alone. By doing so, we follow Kozinets, who has adapted the method of ethnography to the context of computer-mediated environments. In his article about using netnography for marketing research (2002a), Kozinets reports the results of a study of one online community of devoted coffee drinkers. Besides demonstrating the practice of netnographic research, he shows what can be learned about the meanings of contemporary coffee consumption in the U.S.A. by studying just this one online consumer community. Our netnography of SmulWeb fits Kozinets' research approach, but our goal differs.

Because of the broad scope of the culture of food consumption and our focus on one virtual community organised around culinary matters, this study can impossibly present an insightful analysis of the encompassing ethos and habits of 'the' consumer community of

culinary enthusiasts. As said before, SmulWeb has a varied member database; the members do not share one similar lifestyle. That what ties them together is the fact that they are interested in culinary matters, varying from a more practical interest to an encompassing dedication. Most ethnographies of consumer communities focus on that what binds the members (e.g., sky-diving, Harley-Davidson motorcycles, Frond Bronco, Macintosh, Saab, Star Trek, or devoted coffee consumption). The communities' shared practices and consumption-meanings are put central stage, whereas their tensions, rivalries, and diversity are underexposed (Harrison & Jenkins 1996; Kozinets 2001). Because of the heterogeneous character of our focal community, differentiation amongst the members and their culinary consumption practices and meanings is likely to occur and to persist. It is interesting to examine how this plays out in the online discussion forums. How do members communicate with each other? How do they create and negotiate culinary consumption meanings? Which culinary topics unify them and which cause fragmentation? And in what ways do they influence each other?

Our study primarily aims to illustrate the interaction dynamics among the discussants of SmulWeb's forums. As such, it contributes to a better understanding of the functioning of virtual communities of consumption as sites of interpersonal influence between consumers. Our analysis has revealed four frames of discussions: (1) sharing knowledge, (2) negotiating norms, (3) opposing values, and (4) celebrating similarities.[28] Because we discuss these interaction dynamics by means of the topics that the forum participants address, we are able to highlight some of the community's shared (or disputed) meanings and symbol systems that surround cooking and eating. In the next paragraph we briefly go into the underlying theory of consumer value systems.

7.2.2 Consumer Value Systems

Researchers have long recognized the important role personal values play in consumer behavior (Gutman 1990). Personal values can be defined as closely held abstract beliefs central to the individual's belief system. They are the most fundamental element in the consumer's mind that structure perceptions of one's self, of others, and of objects. Commonly, values are conceptualized as hierarchical groups of beliefs about end-states of existence or modes of behavior (Rokeach 1973). Marketing often provides the means to reach these end-states (Blackwell et al. 2001). Therefore, understanding personal values and value systems is one of the key concerns of marketing research. In order to examine the basic linkages between core beliefs and behavior, scales such as the Rokeach Value Survey (RVS),

[28] This classification is the result of the researchers' interpretation. It does not necessarily reflect the perception of the discussants. Single postings, chunks of posting, as well as entire discussion threads may contain one or more frames of discussion at the same time.

the Schwartz Value Scale (SVS), and the List of Values (LOV) have been developed (Pitts and Woodside 1991). An important qualitative methodology to understand how values determine market demand is the means-end analysis of laddering interviews. By in-depth probing, laddering seeks to uncover the linkages between product attributes, personal outcomes (consequences) and values that serve to structure consumers' belief systems (Reynolds & Gutman 1984).

The basic assumption of this social psychological view on consumer value systems is that values correspond to universal or essential psychological needs comparable across different sociocultural contexts. However, there is a growing recognition that cultural meanings play a fundamental, but largely understudied, role in mediating relationships between abstract values and specific consumer attitudes, goals, and behaviors (Thompson & Troester 2002). The social psychological orientation systematically ignores the differences in meanings and interpretive discourses among cultural subgroups. This is problematic if one wants to understand how consumer groups define themselves by committing to social activities and interpersonal relationships based on a shared interest in a particular product class, brand or some type of consumption, because: "These intracultural differences generate contextualized consumer value systems that exhibit distinctive cultural content (i.e., meanings and narratives), and accordingly, meaning-based linkages to the particular consumption goals and practices through which these values are enacted" (Thompson & Troester 2002, p. 553).

Our research site is apt to overcome the limitations of social psychological value research, because it offers the opportunity to examine consumer narratives about contextualized consumption experiences. Consumer value systems are articulated (and revealed to researchers) through the stories that individuals tell about their consumption experiences (e.g., Muniz & O'Guinn 2001; Kozinets 2002a; Thompson & Troester 2002). By exploring the discourses surrounding cooking and eating, we hope to highlight some of the ways in which the community members interpret their consumption experiences and construct meaning-based linkages between product attributes, their motivating values and the consumption goals that they pursue. These narratives are likely to converge in some instances, but diverge in others. Thus, insight can be gained in various co-existing consumer value systems regarding culinary matters. Understanding the culinary value systems of various consumer groups is key to achieving the market orientation that can successfully conceptualize new products, develop positioning strategies, and create advertising campaigns that meaningfully communicate to the general and niche markets (cf., Kozinets 2002a). Hence, we will retrieve marketing implications from our analysis where possible.

7.3 NETNOGRAPHIC METHOD

It is increasingly recognized, among researchers and marketing practitioners alike, that online communities organized around market-related topics form apt research sites to gain insight in de metaphoric and symbolic world underlying consumers' needs, desires, meanings, and choices (e.g., Thomsen, Straubhaar & Bolyard 1998; Fox & Roberts 1999; Kozinets 1998, 1999, 2002a; Ward 1999; Muniz & O'Guinn 2001; Catterall & Maclaran 2002; McAlexander et al. 2002). Monitoring online communities has several advantages over the traditional qualitative methods that are used to study the drivers of consumer behavior, such as focus groups, personal interviews and market-oriented ethnographies. First, member interactions can be observed in a context that is neither created nor directed by the researcher; we may peek into naturally occurring information exchange and influencing strategies among the community members, and listen in on how they talk about food and other culinary matters. Second, the community can be legitimately observed without any invasion of privacy or interference with its activity. Focus groups, personal interviews, and traditional ethnographies cannot be conducted unobtrusively. Finally, online communities can be examined from behind the researcher's desk. They are accessible 24/7. Thus, in contrast to traditional ethnographies of consumer communities, online community research is less time consuming, less costly, and timelier, because of continuous access to informants (Kozinets 2002a).

Various researchers have addressed the specific techniques needed to perform Internet-based consumer research (e.g. Kozinets 1998; Thomsen et al. 1998; Jones 1999; Sherry & Kozinets 2000; Catterall & Maclaran 2002). In 2002, Kozinets' guidelines how to use netnography for marketing research are published in the Journal of Marketing Research. Netnography can be defined as a written account resulting from fieldwork studying the culture and communities that emerge from online, computer-mediated, or Internet-based communications. Both the fieldwork and the textual account are informed by the qualitative methods utilized in consumer research, cultural anthropology, and cultural studies. Kozinets' article provides researchers with a rigorous methodology that is adapted to the unique characteristics of online communities (Kozinets 2002a, p. 62). We have based our netnography on the guidelines described by Kozinets. In the remainder of this paragraph, we will discuss our application of the proposed netnographic method. Successively, we address (1) entrée, (2) data collection, (3) analysis and interpretation, and (4) research ethics.

7.3.1 Entrée

The focal online community has been selected as a research site, because it met the requirements that were needed for the various studies undertaken in the context of this

doctoral research. The community's topic of interest is related to consumption activities; it has a large, varied member database with a substantial number of active participants and contributors; it offers many functionalities, including discussion forums, subcommunities, personal web pages, and a chat room; the community's content is mainly generated by the members; there is operational continuity; finally, the management of the community granted permission for the studies and the administrators cooperated where necessary. The author gained entry to the community and began informal observation of the forum discussions in September 2000.[29] The wealth of data may make it easy to confuse breadth for depth, and mistake quantity for quality (Sherry & Kozinets 2000). Prolonged engagement is therefore required, learning as much as possible about the community, the forums, and the individual participants. As part of ongoing research, she reviewed discussions, contributions in the form of recipes, reviews, and articles, subcommunities, nominations, lists of favorites, members' personal web pages, guest book messages, et cetera. The author also participated in an offline community gathering and performed in-depth interviews with several participants and the community's administrators. After building a knowledge base for three years, she intensified her monitoring of the forums by systematically reviewing all topics discussed in the forums in the year 2003.

SmulWeb contains the following forums: (1) *culinary forum*, (2) *slimming forum*, (3) *wine forum*, (4) *question and answer forum*, (5) *computer and Internet forum*, and (6) *general forum*. A computation of the number of discussion threads per forum during the year 2003 makes clear that the general forum, in which primarily non-culinary issues are discussed, is most active with a total of 1187 discussion threads and an average of 57 postings per thread (Table 7.1). The second-active forum is the culinary forum with 558 discussion threads that, on average, consist of 24 postings. The slimming forum and wine forum are least active. It would be too time-consuming to make an inventory of all members who contribute to these forums. However, some information about the scope of member participation in the forums can be obtained when we compute the number of members who started one or more discussion thread(s). Although the general forum consists of most discussion threads, it is only 127 different members who have initiated these discussions. Opposite to this is the slimming forum that contains 28 discussion threads that are initiated by 26 different members. This means that the general forum has a group of very active and loyal discussion starters that repetitively initiate threads, whereas the slimming forum attracts members that

[29] To give an accurate description of the followed procedure, we abandon the plural denominator for the author(s) that is commonly used in research papers and, instead, use 'she' to specifically indicate the main author.

mostly start a discussion thread only once. Note that many more members may actively participate in discussions or passively listen in.

Table 7.1
Number of discussion threads, postings per thread, and discussion starters in 2003

	Total number of discussion threads in 2003	Average number of postings per thread in 2003	Total number of members who started one or more discussion thread(s)
Culinary forum	558	24	136
Slimming forum	28	7	26
Wine forum	36	3	22
Q&A SmulWeb forum	260	7	184
Computer and Internet forum	90	6	66
General forum	1187	57	127

7.3.2 Data Collection

The data collection started with a review of all 2159 topics that were discussed in the six forums during 2003. This review was performed in hindsight (February 2004), based on the complete archive of forum discussion threads. The author systematically reviewed all topics to gain insight in the breadth and depth of the forum discussions. What are the recurring issues? Which issues are being discussed in multiple forums and which issues are exclusively discussed in one particular forum? Can trends be detected in the popularity of topics? Can trends be detected in the combination of the discussion starter and the subject addressed? Based on this systematic review, the author shortlisted 94 interesting discussion threads; 73 threads stemmed from the culinary forum, 19 threads stemmed from the general forum, and 2 threads appeared in the Q&A forum. The selection of this shortlist was based on the relevance of the topic in the context of this dissertation, i.e., it had to address an issue that gives us insight into members' knowledge, attitudes, and behavior with respect to cooking, restaurant visiting and kitchen utensils buying. Furthermore, the author selected threads that address topics that are regularly discussed, and that are brought up by a variety of discussion starters. Finally, the selected discussion threads generated ample postings.

A pre-categorization of the topics, before downloading, resulted in the following main themes: (1) culinary expertise, (2) culinary habits and traditions, (3) SmulWeb as recipe information source, (4) restaurants, and (5) kitchen utensils. Because of the abundance of data, we decided to pursue only the first three themes. As the investigation narrowed onto the discourse surrounding cooking and eating, 53 relevant discussion threads were downloaded in their entirety. These threads were purposefully chosen for their rich content, descriptiveness, relevant topic matter, and conversational participation by a range of different community members (cf., Kozinets 2002a, Thompson & Troester 2002). Some topics spurred discussion in an explosion, generating for example more than a hundred reactions within one day, but dying out quickly afterwards. Other threads were more spread out over several days, although the runtime usually does not exceed more than a week. The authors did not participate in any of the selected discussion threads.

The total research volume consists of 3163 postings that are generated by 82 distinct contributors. Forty-one percent of these contributors filled in the online survey, allowing us to examine to which member type they belong; 54% of them are core members, 42% are conversationalists, whereas the remaining 4% are informationalists, hobbyists, and functionalists. Conversationalists are clearly less represented considering their higher base rate (10% versus 6% for the core members), thus, we may conclude that our selection of discussion threads indeed capture the discourse of the group of most dedicated and involved members. Appendix F lists the topic, the date of the first and last contribution, the pseudonym of the discussion starter, and the number of reactions of the 53 selected discussion threads.

7.3.3 Analysis and Interpretation

Our conclusions are based on an iterative content analysis of the 53 discussion threads that we selected. The coding of postings has involved both data analysis and data interpretation (Spiggle 1994). The author amassed, coded, compared, and collapsed postings to form themes and categories. The dissertation supervisors provided feedback concerning the themes and categories (cf., Schouten & McAlexander 1995; McAlexander et al. 2002). Data in each category were compared with data from other postings that were coded as belonging to the same category, and their similarities and differences were examined (Glaser & Strauss 1967; Spiggle 1994). Our interpretation of the data has been constructed through a hermeneutical process that involves a continuous movement between individual postings, chunks of postings, entire discussion threads, and the emergent understanding of the complete set of data (cf., Thompson 1997). Themes and categories that bore up under scrutiny have remained open for further development; those that did not were rejected or modified and advanced again. For example, we first included a frame of discussion labeled

'overcoming differences', but we eventually rejected this category because it could not be supported by enough data (cf., Muniz & O'Guinn 2001; Kozinets 2002a).

To advance our interpretation of the data, we compiled an e-profile of the 82 contributors to the discussion threads selected for analysis. We have reviewed their personal web pages within the community. All personal web pages contain a record of the member's contributions (recipes, reviews, articles) to SmulWeb. The number and the type of contributions serve as an indication of a member's level of culinary expertise. Furthermore, all members have a guest book attached to their personal web pages via which they may write messages to one another. This reveals information about the community's social network. Finally, the personal web pages afford the community members the opportunity to represent and express their self-concepts (cf., Jensen Schau & Gilly 2003). Pages may contain personal information, like age, place of residence, profession, marital status, and hobbies. Some members don't display any personal information on their web pages, but most of the members reviewed are very open about their real identities. Several members have created multiple web pages within SmulWeb that each addresses another aspect of their culinary interest, e.g., one member may have a site dedicated to the Italian cuisine, another to desserts, and again another to low-fat recipes.

Of course, there is a chance that the self-images are carefully cultivated and controlled. However, netnographic research does not really focus on the person as unit of analysis, but on the communicative act (cf., Mead 1938). Consequently, Kozinets asserts that all aspects of this communicative act are relevant and capable of being trustworthy (Kozinets 2002a). Netnography observes no people (as traditional ethnography does), but it observes and must recontexualize communicative acts. The e-profiles have helped us to better understand the ongoing discussions and individual postings in light of the contributors' more or less cultivated identities, their culinary expertise, and their mutual relationships. The e-profiles also enabled us to determine the boundaries of the group that we have studied (Kozinets 2002a). This is important if we want to generalize our results to all SmulWeb members or to the broader community of culinary enthusiasts in general. The group of active forum participants that we have studied consists of approximately 70% women and 30% men. Age varies roughly between 25 and 75 years, with most contributors being 30-50 years old. At least half of group is married and at least half of the group has children. The percentage of Dutch contributors is largest, but there is also a considerable number of Flemings (Dutch-speaking Belgians). Besides, some Dutch participants live abroad, while there are also foreign participants who have moved to the Netherlands. The level of culinary expertise and enthusiasm varies greatly among the contributors.

7.3.4 Research Ethics

The Internet has opened up a wide range of new ways to examine human actions and interactions in new contexts. Like research in traditional, offline contexts, online research raises critical issues of risk and safety to the human subject (Ess & AoIR 2002). Guidelines for ethical marketing research in these traditional, offline contexts are established by institutes such as ESOMAR that has established the ICC/ESOMAR International Code of Marketing and Social Research Practice. However, among researchers much dispute exists of what constitutes ethical online research (e.g., online AoIR discussion list: May 7-14, 2004). Especially the issue whether online forums are to be considered a private or public site spurs the debate. Researchers who consider online forums to be public sites find that postings may be recorded, analyzed, and commented upon without notifying the poster. In their opinion, each posting is a public act performed to reach an audience that is mostly unknown (e.g., Sudweeks & Rafaeli 1995). Others recognize that posters might not always perceive online forums to be public spaces. Hence, forum participants could feel their privacy is invaded when their conversations are used for research unannounced (e.g., King 1996; Sharf 1999). In his guidelines for netnographic research, Kozinets has suggested several ethical research procedures (Kozinets 2002a). Together with the recommendations made by the Association of Internet Researchers about Internet research ethics (Ess & AoIR 2002), these guidelines have directed our research process.

In the first place, the researcher should disclose herself or himself to the community and inform the members about the research goal. When the author made her entrée in the community, she used her personal web page in the community to inform the other members about her identity, affiliation, and research intentions. Following the usual custom, she revealed personal information, among other things, about her hobbies and culinary interests. Through her guest book, she received informational and social messages from other members. Furthermore, she met numerous members during an offline gathering of the community, where she talked about her research. Research results of the survey (Chapter 5 and 6) were reported back to the community by means of article submissions. However, because of the large size of the community (ca. 175,000 members), it is likely that not all participants have been aware of the researcher's presence. To protect this group of members, no data have been collected without the permission of the community's administrators (Ess & AoIR 2002, p.6).

The netnography is based on archived discussion threads. These are stored on the community's site and publicly accessible. The community's policy states that all content may be downloaded, stored, printed, and distributed for non-commercial purposes. Besides, it is specifically mentioned that all contributions may be used unrestrictedly and indefinitely by the administrators. In contrast to the public character of the forums, the community offers a

private communication functionality that can be used whenever community members want to exchange messages that no one else may read. Many members make use of this option. Because of the acknowledged publicity of the forum discussions, obligations to protect individual's privacy, confidentiality, and right to informed consent lessen (Ess & AoIR 2002, p. 5). Nevertheless, we have followed Kozinets' conservative guideline about ensuring confidentiality by giving all quoted forum participants an anonymous name that only indicates their gender. Since the researcher's observation of postings has not taken place simultaneously with the production, forum participants could only be informed about the research in hindsight. This has been done by means of an announcement in the three forums from which postings have been selected for analysis. The author's personal web page within the community presented background information about the research goal, method, and ethics.

Furthermore, the evolving netnography has been posted in its entirety to the virtual community to elicit member feedback. An announcement on the central homepage and in the biweekly electronic newsletter contained a direct link to the paper. The announcement invited all members to read the netnography and to provide feedback about the analysis and interpretation. In a period of two months, more than 600 members followed the link and presumably also read (part of) the netnography. In total, 16 members, representing a mix of both active forum participants and passive forum lurkers, wrote a reaction. All reactions were positive and affirmed analysis and interpretation. The netnography was, in general, considered to give a genuine and correct representation of forum practices ("You have given a clear representation of interpersonal processes."; "Very entertaining to read and very recognizable."; "The forum process is, in my opinion, very well represented and analyzed."; "Although I have not participated in the threads that you discuss, it seems to me that your interpretation is very truthful to other forum discussions."). One respondent finds the netnography incomplete in its (under-)representation of the vigor with which participants react upon each other. Indeed, we have not emphasized the name-calling and insulting remarks that are sometimes made as a result of the tensions between participants. These so-called flame wars[30] have been studied in-depth by linguists and cyber sociologists (e.g., Lea, O'Shea, Fung & Spears 1992; McLaughlin et al. 1995; Thompsen 1996; Mabry 1997; DuVal Smith 1999; Burnett & Buerkle 2004).

[30] Flaming is the practice of expressing oneself more strongly in a computer-mediated environment, than one would do in other communication settings (Kiesler, Siegel, & McGuire 1984).

7.4 RESULTS

We now turn to the presentation of the results. Remember that we started our netnography with three questions: (1) what topics do the forum participants address; (2) how are their discussions shaped; and (3) what are the tactics used to influence each other? Our overall objective was to present an illustration of online discussion practices, and point out what marketers may learn from tracking and analyzing the forum participants' discourse about cooking and eating. The netnographic research method described above has revealed four main frames (shapes) of discussion, i.e., the discussants engage in communicative acts that aim to (1) share knowledge, (2) negotiate norms, (3) oppose values, and (4) celebrate similarities. We have taken these frames as the basis to structure our result section. In the following paragraphs, we will address the four frames of discussion in-depth. Each subparagraph consists of three sections. The first two sections explore the characteristics, processes, and particularities of the frames by means of example narratives about cooking and eating topics that are addressed. We conclude each subparagraph with a reflection that addresses a specific discussion tactic. Members' quotes are translations of the original postings that were written in the Dutch language.

Note that the four categories of discussion frames are not mutually exclusive. Single postings, chunks of postings, and entire discussion threads may be part of several discussion frames at the same time. For example, discussants may share knowledge about the best way to prepare fresh pizza, while they simultaneously negotiate norms about how healthy it is to eat pizza. Also note that the frames of discussion are categories that are attributed to the entire set of selected postings by the researchers. Although member checks revealed that the forum participants found the classification insightful, they don't necessarily define their postings in terms of the four types of discussion frames at the time they make a contribution to a discussion thread. Nevertheless, distinguishing these four frames of discussion enables us to systematically present what is communicated and how it is communicated, and to better understand the functioning of the focal community as a site of interpersonal influence between consumers.

7.4.1 Sharing Knowledge

The discussions in SmulWeb's forums contain a lot of information about food products, food preparation, kitchen utensils, and specific recipes. The participants pose and answer culinary questions and they give each other explanations and background information. In short, they share knowledge. From the existing marketing literature we know that people engage in knowledge-sharing communication for reasons of benevolence, i.e., they truly want to help others (e.g., Fitzgerald Bone 1996). However, knowledge is also shared to experience

feelings of prestige (e.g., Dichter 1966). In the discussion threads that are studied examples of both sides can often be found simultaneously. The forum participants exchange information, but at the same time, by showing what they know, they articulate conceptions of culinary expertise. They constantly challenge and put each other's culinary expertise to the test. In the following analysis we show how exchanging information and establishing expertise about (1) potatoes and (2) the Belgian cuisine go hand in hand. Moreover, we reflect upon one of the tactics that the discussants use to establish superiority in expertise, i.e. calling upon authority.

Information sharing and expertise about potatoes

Potato preparation is an issue that pops up again and again in the discussion threads. This is no surprise considering the fact that potatoes are a core element in the Dutch cuisine. Van Gogh's famous painting "The Potato Eaters" (1885) exemplifies the historical importance of the potato as the main nutrition for the ordinary Dutch man in the nineteenth century. But to date, potatoes are still a major part of the daily dinner of many forum participants. Even though the potato seems a simple food product, the Dutch discern many aspects regarding its preparation. Although we would assume that there are more complicated things to prepare (and thus to establish expertise by discussing it), it is exactly the simplicity of the potato that lends it for distinguishing between ordinary and superior cooking qualities. Consequently, when the forum participants tell each other about how they prepare potatoes, the discussion soon turns into a contest of true expertise as becomes apparent in the following discussions about potato peeling and the usage of tools and appliances to prepare various potato dishes.

The conventional way is to peel the potatoes first and then prepare them. Thus, by not peeling potatoes several discussants set themselves apart from the community at large: "I never peel potatoes. I boil them with peel and all, which is good for taste and vitamins. If I make hash browns, the potato peel makes it extra crispy, and if I eat them boiled, I remove the peel on my plate, which saves preparation time." (Bill); "I usually boil the potatoes with peel. After boiling I rinse them with cold water and only then I peel them before I use the potatoes for hash browns or a salad." (Mary). Especially Bill emphasises that his way of preparing potatoes results in healthier, crispier, and faster potato dishes. However, other forum participants question the practice of not peeling: "My husband likes potatoes with peel, especially when I roast or fry them. But not me; it gives me the feeling that I forgot something." (Sandra); "I am afraid that my family doesn't like potato peel. I can already imagine the faces of my teenagers when I would serve them that ☺" (Clair); "Just imagine that my family of five would have to pick and fiddle with the peel at the table. The dinners in my household are messy enough as it is." (Rachel).

To make a more substantive case against the practice of eating unpeeled potatoes, others refer to authoritative sources: "I read somewhere that nowadays it is advised again to eat potatoes unpeeled. They have discovered that the peel contains cancer-evoking substances." (Betty). Thus, this discussant points out that Bill's health argument is outdated. Mary, who boils her potatoes with peel, but eats them without it, contributes her mite to the expertise contest by putting forward that this knowledge is not new at all, but that it has been passed on as common sense from one generation to the next in her family: "This is a rediscovery. One of the old rules of my grandfather was that we always had to remove all the bruises because they contain melanin." But Betty scores her and Bill off by insisting: "I've heard about this as well, but what I actually referred to were pesticides that are used to prevent potatoes from sprouting. If you rinse the potatoes well you remove most of it, but nevertheless the pesticides that are already inside the peel cannot be washed away. It is said to cause prostate cancer, so it's especially harmful for men – I certainly would reconsider your habit, Bill." (Betty).

In another discussion thread the forum participants share their knowledge about preparing French fries. The following quotes highlight how the discussants subtly try to outdo each other's expertise: "Every once in a while I make fries using fresh potatoes and a machine to cut the potatoes. I bake them in two rounds, first to cook them and then to make them crispy." (Betty); "Do you still have such an old-fashioned machine to cut fries? I think my father still owns one, but if I make fries I cut them by hand into the perfect size fries." (Alice); "This potato cutter caused me muscle aches. And half of the potatoes turned into flakes. I cut them myself; this is a perfect job during the time needed to heat the fat (real bovine fat). I bake them first at 160° Celsius and I bake them off at 180° Celsius." (Brenda). The last two discussants consider the practice to use a machine that cuts fries outdated and unpractical. By explicating the type and temperature of the fat that is used for frying, Brenda not only exchanges information, but she also stresses her detailed knowledge. By doing so she tries to establish superior expertise.

Yet other forum discussions about potatoes address the preparation of mashed potatoes. In these discussions the descriptions about special ingredients added become more and more elaborate. Hence, the discussants are no longer just sharing recipes for mashed potatoes, but they are showing off their expertise to turn an ordinary potato into a fabulous dish: "I prepare mashed potatoes with milk, butter, pepper, salt, nutmeg, and a spoonful of mustard." (Brenda); "I always use freshly boiled potatoes, mash them by hand with a pestle under while adding splashes of milk until I get a smooth substance. Instead of mustard, I frequently use grated cheese, which is very tasteful." (Betty); "I prepare mashed potatoes in various ways: with cheese, with fresh herbs, sometimes I mix the boiled potatoes with celeriac and add some yogurt, with garlic, onions or ham cubes, sometimes I mash sweet potatoes, and

sometimes I prepare mashed potatoes with a crispy layer in the oven." (Rachel). Because she can never outdo Rachel, who listed a whole range of possible recipes for mashed potatoes, Mary puts forward her knowledge of a little known variation on mashed potatoes: "Few people are familiar with potato noodles, made of boiled potatoes, coarsely sifted flour, egg, and extras such as bacon and onions." (Mary).

Similar to the discussion of ingredients, the participants try to outdo each other with respect to the tools and appliances that they use to prepare mashed potatoes. It starts with a recommendation by Brenda: "I use a passé vite, some sort of large garlic press to make mashed potatoes. Never messing around with the pestle anymore! I can really recommend it." Brenda is backed-up by Julia: "It is indeed my best purchase of the last months." Alice makes clear that she is up to date, but still prefers the conventional preparation method: "I also have such a passé vite, but I don't have enough strength, so I still use the pestle more often. Or my husband has to help out." Betty does not see any reason to switch to another tool: "For mashed potatoes I just use a pestle, as long as you add enough milk the result is practically without chunks." As in the discussion about peeling potatoes, Mary rejects the passé vite as a recently new product innovation: "I remember this passé vite from my childhood. My mother used to have one with two separate blades, one for a fine and one for a coarse result. I thought it was a heavy and nasty job, but we used it very much. In my household I used a pestle, but now I use the hand mixer adding milk and butter." (Mary).

The expertise contest continues when Brenda challenges Mary: "Don't you get a result that is too smooth if you use a mixer? It is especially the pressing through the small holes that causes such a fluffy result. I also have a pestle, but I only use it when I mix the mashed potatoes with vegetables, because the result is not very fine and fluffy." But Mary refutes: "No one has ever complained about my mashed potatoes. I don't understand what you mean with too smooth. In the first place, I always use the kneading hooks instead of the whipping hooks, and, secondly, I use cream or sour cream, which give a sturdier result than milk." (Mary). Brenda concludes: "I thought you meant that you use the type of hand mixer that grinds very fine. That is indeed a disaster for mashing potatoes. The result is sticky. I also don't use milk anymore in my mashed potatoes, only some oil or butter." As these examples about potato preparation make clear, sharing knowledge serves to learn from one another, but it also serves to establish expertise.

Information sharing and expertise about the Belgian cuisine

The SmulWeb community consists of a considerable number of people from Belgian Flanders. Consequently, the forums are also frequented by Belgians: in the discussion threads selected for analysis we find, amongst a larger group of Belgian participants, at least five active Belgian forum discussants (i.e., Amy, Brenda, Harry, Neil, and Nicole). Although

the Belgian and Dutch cuisines are rather similar, there are also noteworthy differences. One of the Dutch forum participants summarizes the main cause of these differences as follows: "The Dutch and German people were known to eat in order to live, whereas the Belgians thirty years ago already lived to eat." (Bill). The Belgian cuisine, therefore, is more exuberant and copious. An illustration of the characteristic Belgian cuisine can be found in a discussion about favorite cheap dishes. One forum participant mentions fries topped with egg as her favorite cheap dish: "Eggs and potatoes from our own chickens and vegetable garden." (Nicole). Several others react enthusiastically that they have eaten this combination quite often when they were younger and that it is still a favorite. All enthusiasts are Belgian. In contrast, a Dutch participant doubts the combination of ingredients. For the Belgians, however, it is a point of recognition of shared culinary traditions.

The difference between Belgian and Dutch food culture is more than once topic of discussion amongst the forum participants. The Belgians are especially surprised about the lunch culture in Dutch restaurants: "In Belgian restaurants you can choose during lunch time from the same menu as for dinner. Therefore, I was very surprised to find out in Amsterdam that they have a special lunch menu." (Brenda); "I think that in the major cities things are not so bad, but in smaller places you usually end up in cafés that all have identical menus." (Neil). Overall, the Belgians do not think very highly of these lunch menus that consist mainly of soups, salads, and sandwiches instead of three course meals. The Dutch participants agree that in general their restaurant culture is inferior to Belgium, however, they also notice positive changes: "Every time I return from France or Belgium, I am surprised about the average Dutch restaurant menu: it is so boring and uninventive." (Jil); Since 15 years or so, the food culture in Netherlands has changed. Just have a look at the number of restaurants that have appeared." (Bill).

These positive developments have also caught the eye of the Belgians: "I noticed that in places at the southwestern coast that are visited by many foreigners you can eat a full meal during lunch time (and it is tasteful as well)." (Amy). Dutch Julia gives an explanation of this trend: "I think that in these places, close to the border, the influence from Belgium is apparent." Subsequently, on Brenda's request, Amy sums up numerous restaurants at the southwestern coast that, in her opinion, serve good food. She is very precise giving the exact location and name of the restaurants she recommends. Also, she describes the type and quality of food that is served in these restaurants. Brenda states that she will print the information and use it when she next plans a trip to the Netherlands. This illustration of sharing knowledge is a good example of information that is exchanged out of benevolence. Without wanting to outdo each other, both the Belgian and the Dutch discussants share their experiences with the Dutch lunch culture and try to come up with reasons that explain the state-of-affairs. Furthermore, the detailed information that is given by the Belgian forum

participant may help others, especially the Belgian cuisine lovers, to make better-informed decisions regarding restaurant visits in this particular province of the Netherlands.

The Belgian participants are not only surprised about the Dutch lunch culture, but also about the Dutch interpretation of the Belgian cuisine. In this respect, the forum participants discuss an issue of a well-known Dutch culinary magazine about the Belgian cuisine. According to the Belgian discussants the recipes in the magazine are everything but exemplary for real Belgian dishes. They bash the suggested combination of ingredients: "Shrimp croquettes with mustard, served on a sandwich. That makes you want to cry!!!! From where do they get this nonsense? And there are more untruths in the magazine." (Amy); "This so-called journalism that does not make any sense, makes me very angry. Shrimp croquettes with mild mustard? For heaven's sake!" (Brenda). To educate the Dutch forum participants about true Belgian shrimp croquettes, Brenda gives her recipe. Several discussants are so enthusiastic about it that as a result they feel like preparing these croquettes: "You have given me an appetite! […] I am going to make them." (Donna); "I will certainly prepare your shrimp croquettes and I will mention your name when everybody cries ooh and ah in delight." (Julia). Also Brenda decides to prepare her shrimp recipe at once: "I am going to the market to buy shrimp. Funny what this forum brings about."

This analysis illustrates that knowledge sharing amongst the forum participants is given extra weight when the supplier of information trusts on 'natural' expertise; in this case the true experts about the Belgian cuisine are the Belgians themselves. Moreover, the discussion serves as an example of how interaction between the forum participants results in need recognition, knowledge expansion, and actual buying behavior.

Reflection

How do the forum participants convince one another that they have expertise? In the potato example we have already seen several tactics to add force to a contribution to an ongoing discussion. Participants try to show off their expertise by describing what ingredients and preparation method they use to make certain dishes. Also, they call upon their longtime experience. They refer to their parents or grandparents who passed on wisdoms and tricks as to emphasize that their knowledge has proven itself for many years. Another way to establish expertise is to appeal to an authoritative source, such as scientific research. However, because scientific sources usually are more theoretical than practical, the community members do not always hold them in great esteem. In a discussion about the difference between fruits and vegetables one participant adds a comment containing lengthy botanic definitions. Another discussant corrects part of this comment based on her hands-on experience with and specific knowledge of a certain vegetable. The first discussant then

concludes that also her experience does not always contest the botanists' vision. As a result, the external authority is shunt off in favor of personal experience.

Calling upon authority can be given extra weight if one is a natural authority oneself, as in the case of the Belgians that inform the forum about the Belgian cuisine. Extra weight is also evoked if one is acquainted with a natural authoritative source. In a discussion about roti the participants argue whether roti is a savory flour cookie, an Indian pancake or a Surinam/Hindustan dish. One of the discussants, being convinced that roti is nothing else but an Indian pancake claims: "I didn't get this knowledge from the Internet, but from experience and practical lessons from an Indian woman." (Brenda). When the participants exchange their favorite roti recipes, she emphasizes that she makes them according to "authentic Indian recipes", thereby suggesting that any other roti recipe has to be a fraud. Others maintain that roti is a Surinam dish "already introduced in the Dutch kitchen forty years ago". A participant who is familiar with both the Indian pancake and the Surinam dish gives the decisive answer that roti's are found in both cuisines. This discussant, which has actually travelled and worked in India, displays her knowledge of the Indian cuisine and Indian roti's in such a manner that it's indisputable that she has more direct and practical expertise than Brenda. Only then, Brenda backs out: "By now I understand that roti is also a dish. Since I like to be right about culinary issues and since I am very annoyed when one is told untruths, I think this is a very good culinary subject to discuss more in-depth. […] For someone who is not familiar with this [Surinam] cuisine, I find it very instructive to know about what roti is, where it is eaten and how it is prepared."

The previous examples have made apparent that calling upon authority is a powerful tactic to convince others of one's standpoint. Nevertheless, authoritative sources vary in the extent of impact. Mass media such as the television, radio, newspapers, magazines, and the Internet, which inform the public for example about scientific research, have limited authoritative power. They are easily put aside in favor of personal knowledge and experience. In turn, personal knowledge and experience gain in impact with exclusiveness, e.g., the discussant that has lived in India is considered to have more expertise about the Indian cuisine than the discussant that is acquainted with an emigrated Indian. Finally, natural authority cannot be disputed. Many community members exploit this fact by presenting themselves as experts about the local cuisine of the area where they were born and raised. Examples of personal web pages dedicated to local cuisines and building upon natural authority are: *under_african_skies* (about the African cuisine), *american_cuisine* (about the North-American cuisine); *friesland* (about the cuisine of a northern province in the Netherlands), and *enschedese_krekels* (about the cuisine of Twente, a region in the east of the Netherlands).

7.4.2 Negotiating Norms

Negotiating norms is frequently recurring frame of discussion in the threads that were analyzed. These discussions offer a lot of information about the values that underlie the attitudes and behavior of the forum participants. Because this information is relevant for marketers and community managers, we address normative negotiations about (1) cooking and eating, (2) food and the society at large, and (3) the functioning of the virtual community.

Negotiating norms about cooking and eating

Obviously, the SmulWeb forum participants extensively discuss their cooking practices and eating habits. There is often more at stake in these discussions then just sharing experiences or exchanging information. Discussants compare their attitudes and behavior. They back each other up and let each other down and by doing so they actively negotiate community norms about cooking and eating. Sometimes a SmulWeb standard is reached. In other cases, discord between the discussants continues to exist. In these normative discussions, two issues pop up again and again: what constitutes a good cook and what constitutes a healthy diet? The following analysis gives an impression of the SmulWeb consensus about these issues and the methods that are used to set the norm. Moreover, we reflect upon one particular tactic of expressing indirect normative judgments, i.e., telling a story about other people's deviating behavior.

The good cook

Within the SmulWeb community being a good cook is not measured in terms of ability to prepare simple or complicated dishes. The forum participants agree that what mostly matters is whether the food was prepared with care and attention. What is also found important is inspiration and using one's imagination, e.g., to cook something stunning with leftovers. Because these notions of attention and inspiration are rather abstract, forum participants exchange their special recipes for several dishes to prove to one another that they are good cooks. At the same time, a lot of discussants state that they don't prepare dishes strictly according to existing recipes. They often experiment with new combinations of ingredients: "I really can't recite my recipes exactly, because I develop them during cooking. A bit of this, and a bit of that; that is how it works." (Brenda); "I like to experiment with this and that. Usually I have seen a recipe somewhere and then I add something and along the way it turns into a completely different dish." (Carol). Amongst the forum participants experimenting is taken as an indication of being a good cook. But in the end, it is generally asserted that the best way to assess if you are a good cook is whether your dishes are tasteful and eaten with gusto.

Obviously, within the context of virtual discussions forum participants may state that their family members and dinner guests praise them for their tasteful dishes; however, no one actually knows whether this is true. In contrast, time invested in cooking is a more solid criterion to assess each other's cooking qualities. In a SmulWeb poll most members reported that it takes them 30-60 minutes to prepare dinner. The forum participants consequently discuss how much time they spend in the kitchen. It is asserted that preparation and cooking time vary; for simpler meals it takes shorter, for more complicated dishes, it takes longer, but an average of 30-60 minutes is indeed found quite reasonable. This norm deviates from the general trend of (Dutch) households that invest less and less time in meal preparation. Thus, the forum participants set themselves apart as more dedicated than average cooks. This is underlined by articulations that stress the joy of taking time to cook: "It pleases me to take time to make dinner after a busy day at work." (Julia); "When I come home after work, I like to take it easy and cook something special." (Emma). Without explicitly mentioning it, these participants oppose their cooking style to other people who use ready-made meals: "I answered 30-60 minutes in the poll, because I prepare a complete dinner from scratch almost every night." (Julia); "I spend on average 60 minutes preparing dinner, but I am such a hobbyist who makes everything herself, like bread, pasta, yoghurt, ice cream, jams, et cetera." (Jody). However, being a good cook does not necessarily mean that one always loves cooking. "There are days that I am completely dedicated to preparing dinner, but there are also days that I am happy that one of my family members takes over." (Rachel).

One participant postulates that she usually spends too much time in the kitchen: "How much time do I spend in the kitchen? A lot. Last Sunday I made nine courses. I know that you [= Bill who only spends 10-20 minutes preparing dinner] are laughing at me now, but cooking is my hobby." (Peggy). Bill responds: "No, why would I laugh at you? It is also my hobby, but because I am alone, I don't go out of my way and finish within 20 minutes. It is lovely that you cook with so much fun and I assume, without doubt, that you don't cook just for yourself, but that you have more people at your table, right?" This response makes clear that cooking for one self (and a partner) is considered less inspiring and fun than cooking for a bigger group (kids, guests). Compare in this respect a comment about experimenting: "I notice that now we're an empty nest, I can experiment less. For two people it's harder. So, I feel the need to invite family members. Then I can really engage myself in cooking, just like when the four children were still at home." (Brenda). Hence, the forum participants agree that preparation and cooking time increase with family size and when one cooks for guests. Also on Sundays cooking usually takes longer than the average 30-60 minutes.

Besides time spent in the kitchen, also the menu that is prepared for dinner parties is taken as an indication of whether one is a good cook or not. One discussant wonders whether the forum participants cook less extensively or with cheaper ingredients for guests who

themselves serve poor and cheap dishes if one is invited for dinner. The general opinion is put into words like this: "Always do your best. Never apply a double standard. […] I might adapt a few things, especially as for the budget, but I will still go out of my way." (Jil); "I will still take pains […] and don't serve anything lousy, but I will also not serve luxurious products or very expensive wines." (Neil); "They will get a tasteful dinner as anyone else." (Susan); "I'll just be truthful to myself and cook whatever I feel like, no matter who is coming over for dinner." (Amy). Thus, if one is a good cook, one is always a good cook. Although the discussants agree that dinner parties are primarily about having a good time together, most also admit that they use these parties to display their culinary skills: "I won't outdo anyone, but usually I like to prepare a four-course dinner, because I enjoy to be creative." (Susan); "Enjoying each other's company comes first, but it is also a culinary happening. If you are the host, you prepare your showpiece and that is fun. If I organize a dinner party, it takes me all day to prepare." (Janet); "The food I serve is dressed up and that is why people like to come over for dinner." (Brenda).

In the normative discussions about what constitutes a good cook, another point of comparison is the question under which conditions one opts for frozen food instead of fresh. The vocabulary used makes clear that somehow the use of frozen foods needs to be justified, because in the end the norm is that one uses fresh produce. The following quotes give an impression of the justifications given: "Frozen foods are a solution when you have little time." (Carol); "I always have green peas in the freezer and dill, and, for an emergency, fries too." (Neil); "Frozen foods are handy to keep in reserve and they are healthy enough. The hospitals all use frozen foods, so why not?" (Harry); "I don't think frozen foods are wrong. If I want something that I don't grow in my vegetable garden, then I buy frozen vegetables." (Linda). A justification given for using frozen meat is the costs: "Nowadays, I buy meat in large quantities, because it's cheaper. I divide it in several servings and freeze it. It's a solution for us, because it's more economical and I don't have to pay a visit to our expensive butcher everyday. I think it differs little in taste." (Clair).

Some participants challenge the norm that fresh is always better: "Sometimes I have the impression that frozen vegetables are much fresher than the fresh vegetables in the supermarket." (Rosa); "Spinach is an example that frozen food can be even healthier than fresh, because it contains fewer nitrates than fresh spinach." (Mary); "I always buy chicken deep-frozen, because it's better against bacteria and there's nothing that gets more easily infected than chicken. [...] The chicken is still warm when it is deep-frozen at minus 25º Celsius, so no bacteria can be developed. If you buy chicken fresh in the store, they are dead for at least 4-5 days, with all possible consequences." (Harry). Nevertheless, some participants only opt for frozen food out of sheer necessity: "I just don't like frozen food. The only thing from the freezer that is all right is spinach, and I also don't say no to frozen

lamb. After all, I usually cannot get fresh lamb, or I have to buy half an animal and freeze it myself anyway." (Alice).

Overall, this analysis makes clear that the negotiations about what constitutes a good cook are sophisticated and elaborate. Since they cannot judge each other's cooking qualities by trial, the forum participants judge each other's values with regard to experimenting, preparation time, dinner parties, and usage of frozen foods. Norms vary with particular situations, which are meticulously described and discussed. By allowing these variations, the discussants are able, at an abstract level, to arrive at a shared community standard of what constitutes a good cook.

A healthy diet

For several years, the Dutch government has propagated a daily menu that contains at least 200 grams of vegetables and two pieces of fruit. Thus, it is not surprising that in the discussions about what constitutes a healthy diet this guideline is taken as a reference point. Furthermore, a traditional Dutch dinner consists of some meat, potatoes, and (cooked) vegetables, which also count as a benchmark in discussions about menu composition. The governmental norms for a healthy diet find broad support amongst the forum participants. All discussants claim that they eat vegetables daily; cooked, stewed, or raw. They are aware that vegetables and fruits are necessary parts of a nutritious diet and the discussants make an effort to meet the required intake, as is apparent in the following quotes: "My boyfriend does not eat vegetables for lunch, so I take care to include veggies in our dinner one way or the other." (Monica); "If I only eat some omelette, I take care to add some tomato and cucumber as garnishing to make sure I take in some veggies." (Sophie); "When my kids want to eat French fries, I make sure they eat extra fruits." (Clair).

Eating the advised amount of fruits is a more complicated matter. "I don't really like apples, but when it's the season I easily eat a basket of strawberries or grapes. However, I don't eat fruit daily." (Monica); "[Because I always forgot to eat fruit] I mash fresh fruit now everyday and mix it with yogurt. That I like!" (Mary). Not meeting the norm goes together with feelings of guilt and negligence: "I am ashamed to admit that I almost do not eat fruits. I just don't like it very much, but I do buy fruits for the kids and they like it." (Clair). For some participants meeting the norm of eating fruits is imperative, even when it goes against their preference and taste. Thus, they have to overcome personal barriers and that requires quite some commitment: "I force myself to eat two pieces of fruit daily." (Amy); "I have to force myself to pay attention to my fruit intake." (Mary).

While the government norms about healthy nutrition are internalized by the forum participants, most of them deviate from the traditional norms regarding dinner composition. "We certainly are no classic eaters, i.e., we do not eat potatoes, vegetables and meat or fish

seven times a week. We frequently eat pasta and rice (or bread, why not?). With the pasta and rice I serve a homemade sauce with fresh vegetables. […] So, I think our vitamin intake is alright." (Amy); "I do not daily eat the conventional potatoes-vegetables-meat dinner. However, I always serve vegetables with the rice and the pasta." (Monica). Thus, deviations from the traditional menu composition are accepted if one complies with nutritious norms. Clair puts it forward like this: "In my opinion, no harm is done if you often eat rice and pasta, as long as you add vegetables, like you and I do." By underlining shared practices she convinces herself (and others) of what is the right SmulWeb community standard.

Despite all proclaimed healthy eating habits, most forum participants agree that eating junk food every once in a while is a treat, because "delicious fat food is an indulgence" (Brenda). The vocabulary used to describe these moments of indulgence illustrates participants' ambivalence towards food that is not good for their health, but that they enjoy just too much to exclude from their diet: "Of course, fast food snacks are unappetizing, but so good now and then." (Alice); "I used to be addicted to pre-processed kidney sandwiches – really very terribly delicious and spicy!" (Neil). Another way of dealing with proclaimed bad food is to rearticulate it into something less harmful to one's health. In this respect, some forum participants engage in a discussion about whether pizza is junk food or not. The sentiments are explicated in detail, and they can be summarized as follows: (1) compared with a McDonald's hamburger, pizza is considered much healthier, (2) a ready-made (frozen) pizza is considered junk food, but a freshly prepared homemade pizza is not, and (3) a pizza from an Italian restaurant is much healthier and appetizing than the pizza's usually served in an ordinary pizzeria. Although the homemade pizza is accepted as a sufficiently nutritious dinner, several participants point out that one should not eat it too frequently. Thus, the ambivalence is not totally overcome.

The negotiations about what constitutes a healthy diet differ from the one about what constitutes a good cook, because the reference norm is set by an authoritative agency and traditional conventions about dinner composition. Rather than negotiating the norm, discussants negotiate how they should put the norm to practice. In cases where the norm is not abided, for example when one indulges in eating fat food, the forum participants together silence their conscience by rearticulating the proclaimed bad habit, or comparing it to something worse.

Reflection

Negotiating the norms about what constitutes a good cook and how one should keep to a healthy diet is not only done by discussing personal cooking and eating habits, but also by telling stories about other people's behavior. All these narratives have in common that they are examples of behavior that the discussants disapprove of. They disassociate themselves

from this proclaimed bad behavior, thus showing that they know what is right according to the general accepted norms. Very popular are stories about the terrible cooking qualities of relatives; especially the mothers-in-law are found to be rather horrible cooks: "We ate several times at my parents-in-law, and I am sorry to say so, but she really can't cook. [She made] a stew with six kilos of onions and only 300 grams of meat and she served it with mashed potatoes and nothing else. Another time [she made] spaghetti with a brown sauce that didn't taste like anything, served with fake Parmesan cheese from the fridge…bah!" (Monica); "I also have that kind of mother-in-law. My kids love her cooking, but that is no surprise, because she mixes everything with applesauce. I really try hard not to eat there." (Donna). The prevailing notion amongst the forum participants is that everyone is able to cook as long as they are willing to invest some time and energy and as long as they are not afraid to experiment a little. These mothers-in-law obviously do not meet these criteria. They serve as the archetypical mother-in-law that one wants to differ from.

Apart from relatives and family members, the forum participants also put friends, colleagues, neighbors, and even complete strangers upon the stage to make indirect normative judgments about other people's bad cooking and eating habits: "At my friend's they have a very light-hearted attitude towards nutrition." (Clair); "I had a colleague who had a fixed weekly menu. They ate omelets on this day, spaghetti with always the same ready-made sauce on the next, then another day chicken with curry, et cetera." (Brenda); "We have neighbors who frequently order home-delivery food, such a pizza and kebab and that sort of things. You wonder how they pay for it with three kids." (Clair); "Sometimes I see people doing groceries who buy a ready-made mix and then only buy the extra ingredients suggested on the package. Out of curiosity I often read the meal suggestion that is given and then I feel sorry for the family that has to eat it" (Monica). Between the lines of these remarks, the discussants actually say something else, namely that nutrition should be taken seriously, that one's diet should have variety, that frequently eating junk food is not good for your health and for your budget, and that preparing meals with a starter kit makes one a bad care taker.

Negotiating Norms about Food and the Society at Large

Besides negotiating norms about personal cooking and eating habits, the forum participants also discuss norms about food and the society at large. A recurring topic in these discussions is, for example, the food that is served in restaurants. The function of these discussions is two-fold. On the one hand, the participants negotiate what is the dominant opinion about food trends. On the other hand, they try to expand the scope of their culinary opinion leadership by broadening the focus of their discussions from the private arena of the home to the public arena of the society at large. The following analysis highlights the normative

discussion about one particular trend, i.e. back to the basic cuisine. We also discuss how the participants, in line with the back-to-basics discussion, contemplate the rise of biological products as a reaction to the abundance of (genetically) modified foods. Furthermore, we reflect upon how the discussants assert their influence as culinary opinion leaders in the context of the society at large.

Back to basics

"What happened to simplicity?" This question is asked by one forum participant as a reaction to her observation that nowadays everyone seems to appreciate 20 different tastes together on one plate, both in restaurants as well as at home: "Please, for me no salad with tomato, strawberry, asparagus, green cabbage, peaches, green peas and carrots, mayonnaise, ketchup and green pepper sauce, as we were served in a restaurant to accompany a raw salmon." (Nicole). Other discussants agree with her: "I thought this fashion had already passed: fling on every dish a strawberry, slice of kiwi, half a pear, and then you are innovative. Not for me! The cheaper the restaurant, the more rubbish you find on your plate, like it could make up for the lack of taste. I'd rather stay at home than experience one taste sensation after the next." (Brenda); "Lobster that is served on a bed of neck sweetbread and caviar makes me laugh. If I eat lobster, I eat it pure to fully enjoy its taste. I don't like hotchpotch food." (Betty); "Pure tastes are also my favorite. Sauces do not cater to my taste. I prefer my entrecote or steak only seasoned with some pepper and salt." (Janet). The dominant opinion is that simple, tasteful dishes require more attention and expertise than complicated combinations, because "the quality and preparation are more important" (Janet). Charles puts it like this: "The hardest part of cooking is obtaining excellent products, that is not an easy task and neither is preparing these pure ingredients rightly. Chef cooks have a fulltime job succeeding in this." Simplicity does not only give evidence of expertise, but it is also considered a general virtue: "It is lovely to enjoy simple food, and you all know: simplicity does honor." (Peter).

Simplicity is the key characteristic of the traditional Dutch cuisine, thus in line with the dominant opinion about simplicity many forum participants honor its dishes: "I never ban Dutch cooking." (Eve); "We eat it several times per week." (Brian); "So do we, and we don't only eat the regular veggies, but also the forgotten ones." (Rachel); "I cook more often the old-fashioned dishes than that I follow the latest trends." (Mary). While the discussants reject the trend in restaurants to serve the food with all sorts of extras, they approvingly notice the trend to serve the basic dishes from the old-days. "Back to the (delicious) old-fashioned food is a trend that has been around already for some time. Everything is served nowadays on a bed of mashed potatoes with some vegetables." (Janet); "The trend is to go back to the dishes from that good old time of our grandfathers and grandmothers. This seems to me to be

especially interesting for the young people who grow up with hamburgers, fries, pre-processed desserts and pizza." (Neil). Although the trend is appreciated, the discussants find it not always easy to copy the traditional Dutch dishes from their childhood exactly the way they remember it: "Three years ago I tried to make *hutspot* [Dutch specialty with mashed potatoes, carrots, onions, and meat]. I have ardently attempted to equal my grandmother's version." (Julia); "Yes, that sounds familiar: I tried again and again to prepare a brisket of beef with the *hutspot*, but it was never as good as my mother's." (Alice); "Now I think about it, I really miss my mother's stewed beets that she prepared every Tuesday. No matter how hard I try to copy them, I don't succeed." (Susan).

However, not all discussants agree with praising the traditional Dutch cuisine: "No, I seldom eat traditional Dutch dishes. I do eat cauliflower, kale, potatoes, green beans, et cetera, but always with a very 'undutchable' twist." (Carol); "Dutch cuisine is fine, as long as you prepare it the new way. To be honest, potatoes, vegetables, meat and gravy: bah. It's only tasteful if you make it a bit fancier." (George); "Preparing traditional dishes in a bit more fanciful way is what I do too. At least I make it more tasteful than the old-fashioned fare." (Brenda). Nevertheless, it is especially this 'making it more fanciful' that goes against the grain of the simplicity norm: "I am perfectly satisfied with the recipes of my mother and grandmother. They are wonderful without any fringe." (Brian); "I don't like fanciful food; it is almost never tastier. I remember a recipe of lasagne with kale. Please, serve me traditional mashed kale and potatoes with sausage instead." (Rachel). That not everybody loves these traditional dishes is explained by Julia as follows: "Don't forget that a lot of older housewives have learned how to cook out of these nasty how-to-run-your-household books that reduced all traditional recipes into bland dishes without any nuances."

There is little debate amongst the discussants with regard to the dishes that they most appreciate: basic and simple. Garnish and sauces give evidence of a lack of culinary skill, because they are generally used to mask inferior ingredients or bad cooking. The forum participants' opinion about the Dutch cuisine is also clear; traditional recipes that use simple and pure ingredients and that are prepared according to longtime family traditions are better valued than the old-fashioned dishes that are cooked in the way prescribed by outdated household literature.

Pure taste

Because the forum participants appreciate pure ingredients with an excellent taste, they talk indignantly about the food and catering industry that have first spoiled our taste with modified products, and that now charge extra for natural, biological products with "the taste of the old-days, but for a price of the future, thus extra expensive!" (Brian). Besides, it is questioned whether these so-called improved, more natural products, are truly improved or

that the industry just caters to the feelings of the consumer with catchy slogans. The general opinion within the forum is that a lot of these new products are no true improvements at all, but that a lot of people lack expertise to really notice: "I always think twice before buying these 'natural products', but it seems like most consumer like to be led astray." (Charles). The forum participants oppose themselves to the ordinary consumers who supposedly don't buy biological products, either because they don't notice a difference in taste or because they are not willing to pay the more expensive price: "The biological food and natural products stores don't do well, so the average consumer doesn't really care about food modifications. Of course, the biological products are more expensive, but if we would buy these products en masse, then they will eventually become cheaper." (Rachel); "It is for sure that biological products are pricey and most consumers are not willing to pay this high price. […] However, the biological shelves in several supermarkets have greatly expanded, especially after the recent wave of food scandals, and I have the impression that there is a market for these products. Of course, the supermarkets in question all aim for the more affluent, higher educated singles or DINK-couples who can afford it." (Charles).

The last remark underscores the viewpoint of the forum participants that most consumers opt for biological products not because they truly appreciate the pure taste, but out of fear for contaminated food (e.g., BSE, avian plague, swine plague, foot-and-mouth disease) or just because they have enough money to spend on the latest food trend. One discussant highlights the distinction between the community of like-minded culinary enthusiasts and these other consumers in the following manner: "I think that there is a group of people out there that eats things just because they are IN, without finding it especially tasteful." (Brian). In contrast to 'these people out there', the forum participants find that they are able to taste and appreciate the pureness of biological products: "For me exclusiveness is a tomato that really tastes like tomato, a cucumber that tastes like cucumber, a potato that has the tastiness like it used to have in former days, and fruit that tastes like it should." (Susan).

The discussion turns to the question whether food was indeed better and more tasteful in the old-days. Some state that it is false memory: "seniors always say that things were better before" (Bill), while others point to the changing practices of the food industry that have left their traces in the taste of our food products: "Products are so much more manipulated than before. Dutch tomatoes were even no longer accepted in Europe, because they were too watery." (Susan); "The food industry has become large-scale, with processes that are sped up and that ignore the natural seasons in agriculture. This is why the taste is definitely different from before, when there were still small farms that abided the seasons." (Brian). But Bill insists that: "[...] growing and processing techniques have developed so much, that it is indeed possible to give a mass-produced product a very good taste, thus you have to have an extraordinary taste bud to taste the difference." Several forum participants eagerly use this

remark to state that they have such a developed taste bud: "In my household, we do taste the difference." (Susan); "We have our own vegetable garden and everything we harvest ourselves is unsprayed and it clearly tastes better and is more nutritious." (Rachel); "I do have a sensitive taste bud, which is not always a good thing, i.e., money-wise ☺" (Charles).

This analysis of discussions about food modification highlights the linkages between product attributes, consequences, and values that make up the forum participants' belief system about modified food. For them, enjoying the pure taste of natural and/or biological products is a consumption outcome that is strived for. The underlying value is a mix of enjoyment in life and honoring and conserving traditions. Modified foods are associated with bland taste and an unwelcome advancement of society that increasingly controls nature. It is noteworthy that the discussants do not dismiss modified food for reasons of protecting the environment or personal safety (health); values that are normally associated with genetic modifications.

Reflection

The two previous paragraphs have made clear that several discussants consider themselves to be different from the majority of consumers. They believe that, in contrast to the ordinary consumer, they are culinary experts who truly appreciate the art of simple cooking with traditional, pure ingredients. They characterize their taste as developed, i.e., they can distinguish between pure and modified products. Besides, they feel that they are no trend followers: "I don't follow trends, never did. I just cook what I like. I am open for new things, but only if it is tasteful, not to follow the trend." (Lillian); "There are definitely people who only eat things because it is in fashion, but these people will be hard to find here in the SmulWeb community." (Alice). Trends are thought to be commercially inspired and thus not necessarily culinary interesting. Bearing in mind this self-reported characterization of the forum participant as a culinary expert who is averse to flashy trends, it is worth seeing how the forum participants reflect upon their culinary opinion leadership in the context of the society at large; in what cases and how do they assert their influence?

One forum participant confronts the others with the following dilemma with respect to other people's cooking skills: "I know a couple of hopeless cooks; when I enter their kitchen and see how they cook or how clumsily they prepare and serve food, then I just have to look away or leave in order to prevent myself from making a nasty remark. Yes, I know that not everybody excels in cooking, neither do I, but sometimes… Is it better to shut up like I do, or do you comment upon the bad cooking skills of your relatives and friends?" (Neil). The reactions show that not everybody is as considerate as Neil: "I am only invited for dinner incidentally nowadays, because I am always critical. I really do my best not to vent my criticism, but I cannot restrain myself." (Harry); "I am afraid to be invited for dinner

somewhere [because of bad experiences], but luckily I am almost never invited anymore, although everyone still likes to be invited by me." (Brenda). Preventing these situations is also a tactic that is being used by several participants; they just don't accept dinner invitations of bad cooks: "I will not easily let myself be invited by someone who cannot cook." (Nicole). Others do as Neil; they hold their tongue, except in special cases: "I always keep my comments to myself, except when I see my mother busy in the kitchen." (Amy).

When it comes to criticism about their own cooking skills, the forum participants only accept that under certain conditions: "For years the rule in my household has been not to vent criticism at the dinner table. Everyone knows this, even my youngest kid who is three years old. Everything should be tasted and criticism is only allowed after dinner." (Carol). Especially the habit not even to try the food that is served is strongly rejected: "Of course everyone dislikes something, but if you are not even willing to taste I find that an affront." (Nicole); "With a bored face shoving your food around on your plate or even making disgustful faces, I find that improper behavior." (Rachel). When dinner guests pull long faces, the forum participants do not question their own cooking qualities, but they settle it as a character flaw of the other person: "Then I wonder if this person is really capable of showing a passion of any kind." (Jennifer); "People who are not able to enjoy food, cannot possibly be companionable." (Marc).

Whereas the forum participants are convinced of their superiority with respect to cooking, they are more receptive to differing choices and preferences regarding food products and restaurants. In these cases the norm is that everyone has his or her own taste. This means that recommendations are only made occasionally and very specifically. The following quotes highlight some of the sentiments about word-of-mouth recommendations: "I used to be quick making recommendations to everyone, but in the course of time I have learned to keep my comments more to myself. What I like, you may find mediocre, and vice versa. I do tell people if I am enthusiastic [about a restaurant or food product], but not with the intention that they should try or buy it themselves." (Amy); "I have had too much criticism afterwards when I made recommendations about restaurants. Also, with regard to many restaurants I have revised my opinion after the first visit, because their service has deteriorated." (Mary); "I only tell people that I had a nice dinner at a restaurant, but I will never tell them to go there themselves." (Harry); "I have become very cautious. I will never say 'you should visit this restaurant', but instead I will tell others 'if you want to eat a good fish soup, you could go there." (Neil). The general opinion is that "you should really know the person you make a recommendation to." (Neil). At the same time, the forum participants are also not very receptive to recommendations made to them: "I seldom take advice into account. I trust my own judgment best." (Sophie); "I never listen to people who advise me to have dinner in some restaurant. Too often this has led to a negative experience." (Brenda).

Negotiating Norms about the Functioning of the Virtual Community

An interesting topic of discussion in the forums is the functioning of the virtual community. In these discussions the forum participants especially focus on the quality of the virtual community as a source of information. They negotiate the rules of the game with respect to contributing to the recipe and article databases. The debate about this issue is fierce; there are a lot of differing normative opinions about collecting and copying information. In essence, this debate is an illustration of the varying ways in which the members make use of their community membership (cf., Chapter 6). In the following analysis we will explicate the norms about submitting information. Also, we will address how the forum participants use the community as a source of information. Finally, we reflect upon several tactics that the forum participants use to comment upon and influence each other's online behavior.

Submitting recipes to SmulWeb

If a member submits a recipe to the SmulWeb database, the recipe appears on his or her personal web page. Besides submitting recipes oneself, SmulWeb also offers the possibility to link to a recipe that someone else has submitted. In this case, the recipe appears as a 'favorite' on the personal web page of the person who made the link. There is a competitive list for both the amount of recipes submitted (Top 100, member-controlled) as well as the amount of bookmarked, favorite recipes (List of most favorite recipes, administrator-controlled) that keep up which members have submitted most recipes and which members have submitted the most favorite recipes, respectively. These competitive lists have spurred on many members to make as much contributions as possible. More than a thousand recipes submitted by a single member is no exception. The consequence of this practice is that the SmulWeb database contains many similar or even identical recipes, copied from magazines, cookbooks, Internet sources, and sometimes from other members. The SmulWeb administrators do not exert any control over the submissions, thus it is up to the members themselves to regulate the practice of submitting information. Ideas about what is right and wrong diverge.

A few members would like a database that only contains original, self-contrived recipes. However, this is not feasible: "If there were only self-contrived recipes submitted, then this would be a very small database." (Helen); "Who still has self-contrived recipes? No one. All recipes have been made before and they are only adjusted by adding an ingredient or leaving something out. If I contribute a recipe to SmulWeb it is 80% stolen and 20% me." (Bill); "In most cookbooks you find identical or similar recipes. Originality is rare. Besides, what is originality? Every new and original recipe usually is based on an existing one." (Rachel). Since there are few true original recipes, the next best thing is to submit only recipes that one has tried out and adjusted to his or her personal taste: "If you try out a recipe several times,

you'll definitely adjust amounts, spices, et cetera. When you submit the recipe then, it has actually become your variation on an existing recipe, and there is nothing wrong with that, right? Those people, who copy and paste from any source without adding a personal flavor or even without trying the recipe, should be so decent as to mention the source of 'their' recipes. Many people do so, including me." (Mary).

Nevertheless, many members do submit recipes that they haven't tried yet. Rachel justifies it like this: "You don't have to have prepared every recipe yourself in order to know whether it is good. If I read a recipe, then in my mind I can taste the result. With respect to recipes, I usually don't mention the source, but I fill in 'no' in the line box that asks if I made up the recipe myself. With respect to articles I usually do mention the source." And another forum participant reports: "I also collect recipes that I haven't tried yet. And I delete them again if they turn out to be not as special as expected. If I don't submit them right away, then I lose all these scraps of papers with interesting recipes. But I never submit a recipe without mentioning its source. These recipes are not mine. I feel more comfortable like this and no one can accuse me [of violating copyright]. Besides, if I write down the source, then I always know where I got the recipe and that might be convenient." (Rosa). Thus, the norm amongst the forum participants is either to mention the source of a copied recipe or to report that it is not self-contrived. The following quote nicely summarizes the underlying reason: "I just don't like to strut in borrowed feathers." (Amy).

The forum participants have, furthermore, constructed a hierarchy of copying practices. It seems that a strict distinction is made amongst copying recipes (1) from cookbooks, which is generally ok, (2) from the Internet, which is generally rejected, and (3) copying each other's contributions to the recipe database, which is generally abhorred: "Copying a nice recipe from your cookbooks every once in a while is not a bad thing, but copying the same recipe a thousand times from the Internet is worse." (Linda); "I just think it is pointless to copy recipes from one site to the next. It's hard to see the wood through the trees as it is with the information overload on the Internet." (Amy); "There is nothing against copying recipes from cookbooks as long as you mention the source. Some people just prefer to have everything online instead of in cookbooks. However, copying online recipes is something that I don't understand. Especially when people copy recipes from within the SmulWeb database I find that strange and annoying. You can also link to that recipe and then it appears on your page as a favorite." (Betty); "I think that copying a recipe from a cookbook is not as bad as copying-and-pasting each other's recipes. Stealing like this passes the limit." (Mary). Besides recipes, members may also copy articles. This is altogether disapproved of: "It is a scandal when members steal from one another. I mean when they steal recipes or even entire self-written articles." (Mary); "[Copying recipes is one thing], but copying entire articles including accompanying pictures, that is really wrong." (Julia). Although the forum

participants in general seem to agree on the rules about copying recipes and articles, not all community members conform to these rules, either because they are not aware of them or because they have a different opinion.

The forum participants represent a particular group of community members, i.e., many of them belong to the group of core members that we have distinguished in Chapter 6. Although they exert a lot of influence on the community, they don't control it. As said, the introduction of the Top 100 has resulted in a competition amongst community members to submit as much recipes as possible. Many forum participants don't understand why it would appeal to someone to submit thousands of recipes: "It might be that someone gets a kick out of submitting the largest amount of recipes or to rise in the Top 100. Well, there are worse ways to get your kicks. I think it is a special kind of people, who, one way or the other, lack attention." (Jessica); "Or they are just narcissistic." (Mary). Within the forum the prevalent opinion is that the competition has caused a deterioration of the quality and originality of the recipe database, since many recipes are copied over and over again with only minor or no adjustments at all. Another point of concern is the amount of contributions that address other than culinary topics: "What I don't expect to find on a culinary site are all these trivial articles [dairies, personal stories, poems, et cetera]. It would be nice if we could distinguish between culinary articles and the rest." (Phoebe); "I also regret that there are many articles submitted that have nothing to do with culinary matters, but I stopped to fret about it. By the way, if I submit a [culinary] article, then I usually receive many nice reactions, so luckily there are still enough people around who are able to locate my articles amongst all the trees." (Julia).

These sentiments illustrate that several forum participants feel somewhat disappointed that the community expands and develops into something that is different from the community they initially joined or ideally hoped to find. In line with theories about the community membership lifecycle (e.g., Kim 2000; Alon et al. 2005), the result may be that they eventually cease their membership. The following excerpt from a longtime participant gives insight in how she contemplates this scenario and how she reflects upon the community and her membership: "Of course all members may decide for themselves what to do with their membership: one likes to submit 5000 recipes, the other likes to annoy the forum, again someone else likes to hip hop from one guest book to the other and leave a cute illustration. […] I think everyone agrees that SmulWeb has defeated its object of being a good recipe database. It has become a chat box and website full of illustrations; the topic of cooking is trivial. Personally I don't like this development, but it offers a lot of entertainment and recreation to a lot of people. […] If the ratio cooking versus other topics worsens, then I might leave the community. I won't just stay to participate in the forum […]. The good

contacts that I have built up within SmulWeb will continue to exist even when I am no longer a member." (Rachel).

Retrieving recipes from SmulWeb

Because of the abundance of recipes in SmulWeb's database, it is not always very easy to find a recipe that suits one's taste and skills. The database allows for search actions based on numerous key words, like the name or the type of dish, preparation method, main ingredients, other ingredients, cooking time, occasion, et cetera. However, if the search action is too general, one may find more than a thousand results, and if it is too specific, not one recipe is found. Many forum participants voice their annoyance about this situation, like Lucy: "You can't see the wood for the trees." Apart from the quantity problem, the forum discussions bring to light that the participants think not very highly of the quality of the recipe database. The many identical recipes that are copied and submitted again and again often contain the same (content or spelling) mistakes. Besides, various discussants consider the recipes that are copied from magazines, newspapers, supermarket flyers, and food product packages not very creative and challenging. Brenda puts it like this: "SmulWeb offers no quality but quantity, thus it offers a lot to some people and nothing to others."

As a result, many forum participants agree that there are better ways to search for recipes instead of using the SmulWeb database: "I am not interested in 200 similar recipes for one particular dish. If I need a good recipe, I'd rather go to a site that contains more professional recipes." (Phoebe); "I look for information outside SmulWeb and only come here to participate in the forum." (Brenda); "[Instead of using SmulWeb] I search for recipes in lots of sources: books, Internet, anywhere where I can find something tasteful." (Cathleen); "I also don't retrieve recipes here. I have plenty of cookbooks, magazines are full of recipes, and otherwise I just have a look at Google. That is much quicker. And then [if I need a recipe] it doesn't bother me when the SmulWeb server is down." (Helen); "If I need a recipe I don't turn to SmulWeb, but I just perform a search action with Google and by doing so I have discovered many good cooking sites! Here I only follow the forum and I really hate it when the server is down just when I have a day off from work." (Amy). To separate chaff from wheat, many discussants have developed a search tactic within SmulWeb that focuses on the contributor instead of the recipe: "I don't look at the recipes of members who have submitted over two thousand recipes. By now I know which members have good recipes, and once in a while I have a look at their pages or I write to them to ask if they have the answer to what I am looking for." (Linda); "I always search for recipes by the names of the contributors and not by the recipe label itself." (Brenda).

Reflection

In the previous two subparagraphs we have illustrated the norms that the majority of forum discussants set with respect to the submission of information to SmulWeb. Because many community members do not comply with these norms, numerous forum participants have stopped using the community to search for recipes due to a perceived lack of quality. However, some participants do not leave it to that. Instead of just discussing the norms within the forum, they try to enforce the rules to other community members. What tactics do they use? Obviously, a first step is to spread to word, i.e., to point out the rules to people who break them: "I especially cannot stand it when they copy each other's recipes and put them on their own personal SmulWeb page. If I encounter such a person I always send a message to those who submitted the recipe last and ask them if they knew that the recipe is already submitted before." (Patricia). In case one finds out that another member has copied his or her recipes or articles within SmulWeb, usually action is undertaken by contacting this member via private mail or a personal guest book message asking to remove the information or mention the rightful source. But such a request is not always answered, as Linda discovered when one of her articles about making jam was copied and resubmitted to SmulWeb under another name.

The next step to correct the member involved is to make her faux pas more publicly known by posting a reaction at the end of the resubmitted article that states that the article is not originally hers. When the wrongdoer also does not respond to this reaction, Linda starts a discussion thread about it in the culinary forum to vent her frustration. The opinions about the last step are divided: "I don't like this idea of a 'scaffold' within SmulWeb; I would just leave it by sending a message." (Neil); "I think a scaffold is a fair punishment and maybe the only thing that really works. Members who behave in this way do not deserve any protection, because they know that what they do is wrong, and it might serve as a warning for others." (Rachel). However, another member reports that when she was new in the community she also made a copy of another member's article and that she only found out that it was not 'allowed' when she received a message: "I am very glad that she reacted in this way and explained the rules to me, instead of putting me on the scaffold. If it happened to me, then it might also happen to others. Not everybody knows directly how things work around here." (Rosa). In the end the issue is settled between Linda and the other member, who turned out to have copied the article not from within SmulWeb, but from one of Linda's other personal websites on the Internet. Because copying from outside sources is not considered a 'crime', Linda offers her apologies to the other member and the forum participants about starting all the commotion. She also puts a copy shield and source protector on her pages so that copying is inhibited.

Another tactic to enforce the rule not to copy information is to scare 'offenders' by accusing them of violating the law on copyright. This tactic is, for example, followed by Harry, who has taken it upon him to locate recipes that are copied without mentioning the original source: "For some time I have been busy tracking copies. There is only one word for people who copy entire websites – they are THIEVES. […] All classic recipes may be copied and multiplied according to the European law, but photo's and descriptions of recipes made by individuals and that exist for less than fifty years are not allowed to be published without the author/photographer's consent." But Harry's effort finds little support amongst the forum participants: "I don't get the reason why Harry is so upset about these copied recipes. As far as I am concerned, someone may copy the entire culinary encyclopaedia on her personal page. If she wants to break the law, that's up to her. I find a bit pathetic when people are spying on one other to see what is copied and what is not." (Jessica); "I think he has nothing better to do! Please, leave us alone? (Ellen); "Only the SmulWeb administrator can oblige the members to mention the source of their recipes, not one or several other members. What happens now, checking recipes and leaving messages in guest books about so-called illegal copying of recipes, I really find offending."(Helen); "I think it is a bit strange to act like a stalker checking all recipes and writing comments. Who are you to write that these people are THIEVES?" (Julia). And to make sure that she really is not breaking any law, one of the accused members, who has copied a recipe from a supermarket flyer, states: "I have checked the sites of these supermarkets and there is nothing written about copyright. I think these recipes are not very original; they already exist, but are adjusted to their product inventory. I don't think that these supermarkets care about the fact that their recipes are submitted to the SmulWeb database." (Helen).

Besides the serious discussions that are dedicated to the functioning of the virtual community, and the tactics that are applied to enforce the rules, the community members have also developed a more light-hearted approach to voice the rules of game. Behavior that is considered undesirable can be nominated for a 'rubber hammer'. The rubber hammer is introduced by Julia who sums up the possibilities for which it can be used: "When people become too fierce, submit dirty illustrations, say 'Smully' instead of SmulWeb, start talking about their pet topic, post three requests a day, think that their copyright on a salad niçoise is violated, et cetera, et cetera." The rubber hammer is a funny way to say that someone has to calm down and get her act together. One of the first hammers is given to a member who, like Harry, accused other members of copyright violation. As we have seen in the previous paragraph this kind of rule enforcement is heavily criticised, thus by giving him a hammer the participants make clear that they don't appreciate his behavior. Another nomination that is strongly rooted in the forums is the 'golden spoon'. If a member starts a discussion thread that generates one hundred reactions he or she is honored with the spoon. Another hundred

reactions mean a second golden spoon, et cetera. The function of the nomination is to compliment the member who has introduced a discussion topic that spurs interaction and, thus, contributes to the livelihood of the forums.

7.4.3 Opposing Values

So far, we have shed light on two frames of discussions, i.e., sharing knowledge and negotiating norms. We have seen that in both types of discussion frames tensions may arise between discussants' conflicting opinions. When forum participants share knowledge, they usually also try to establish their expertise, often to the disadvantage of others. When they engage in discussions that negotiate norms, sometimes agreement is reached, but in other cases discord continues to exist. It is no surprise that these tensions occasionally disrupt into outright conflict. In this paragraph we analyze one particular issue that leads to oppositions within the forum, i.e. the fresh versus ready-made debate. Especially the discourse that is used by either side reveals the opposing values. Furthermore, we address the underlying distinctions that play a role in bringing about the tension. Finally, we reflect upon the way discussants soften the sharp edges of the opposition by justifying and contextualizing their behavior.

The fresh versus ready-made debate

One of the fiercest debates amongst the forum participants is the debate about using fresh produce versus using pre-processed, canned, and other ready-made products. The pro-fresh norm is set by recurring statements that it is so easy and just as quick to make roti, mashed potatoes, pesto, spread, et cetera, oneself instead of buying it in a pre-processed, ready-made form. Furthermore, it is generally asserted that the taste of fresh produce is better than the taste of ready-made products. Some take this taste difference into extremes. One forum participant describes how he recently made pesto himself for the first time, and he equates this experience with sexual satisfaction: "What a rare pleasure to prepare and eat! […] Oh, oh, oh, what an orgasmic feast. I can really recommend it to everyone!!! NEVER pre-processed pesto again, NEVER, NEVER, NEVER!" (Scott). This description meets approval of longer-time fresh-lovers and the new convert is happily included in the group of bon-vivants.

The pro-fresh norm is fiercely propagated within SmulWeb, particularly by downgrading usage of canned foods, pre-processed products, ready-made mixes, ready-made sauces, ready-made soups, and starter kits for meals. In one of the discussions about this issue, a strong advocate claims that SmulWeb should really be exclusive for "idealistic and passionate" cooks and not for people who only use these easy-to-prepare products (Brenda). However, a lot of other participants don't agree with this viewpoint: "These people are

exactly in the right place, because they can learn something around here." (Kelly); "SmulWeb is about food in its widest sense, thus canned foods and pre-processed products should definitely be included as well." (Rachel). Nevertheless, several forum participants feel like culinary underdogs, because of the anti-canned food and pre-processed products discourse. One of them recounts her menu of last week that contains a lot of the questionable products. She verbalizes her feelings of inferiority like this: "The kids were not at home, that's why! And I had no other options, but now I feel like the worst cook ever. I think I should start a homepage with the title culinary barbarian." (Sharon). Thus, the opposition is composed of the *bon-vivants* on the one hand, and the *barbarians* on the other.

The group of forum participants, who regularly use canned foods, pre-processed products, and the like, close their ranks and challenge the pro-fresh norm. This is mostly done by simply admitting that they deviate from the norm, i.e., by admitting usage of ready-made products. The vocabulary that is used suggests a real coming out: "I dare to say it." (Nicole); "I dare to be open about it." (Sharon). The debate about this issue polarizes, because the group that admits to use canned foods and pre-processed products doesn't believe that the group who states that they make everything fresh is honest. Their sentiments are put into words as follows: "I really don't believe that you always use fresh produce and nothing else. […] I use canned foods and pre-processed products and that is considered by some a deadly sin." (Nicole); "I don't believe anything of these always-everything-fresh stories. […] I don't use ready-made products regularly, but I shall never say NEVER." (Rachel); "I am honest: I also cook with ready-made mixes and I really don't know what is against it? Yes, of course I am also not highly talented in culinary matters." (Sharon); "But you are very honest, and honesty lasts. […] Everyone uses canned foods and pre-processed products, but they are just afraid to admit it." (Tony). Moreover, they are quick to refute the idea that using ready-made products makes one a bad cook: "I sometimes use pre-processed products […] and sometimes deep-frozen foods. And I am certainly not the worst cook around here." (Nicole). Similarly, several participants point to the fact that chef cooks also sometimes use pre-processed products, thus that it is not against culinary experts' norms.

The pro-fresh group feels attacked and not taken seriously, because of the allegations of dishonesty. Advocate Brenda states: "I don't take it well when one claims that people who don't use ready-made products don't tell the truth. […] It looks like you are considered a sinner or liar if you say it [that you make everything fresh]." She continues to explain the allegations as follows: "Probably they are a bit ashamed for cooking with ready-made products." One of Brenda's allies reacts more neutrally: "I do believe that there are people who don't buy starter kits for meals and ready-made mixes and sauces. I am one of them." (Julia). Some participants go into lengths to explain that they are forced to make everything fresh, because they are allergic to additives and preservatives. Presumably, these participants

don't want to be seen as groupies of the always-everything-fresh religion; they simply have diet reasons to avoid ready-made products.

One pro-fresh forum participant offers an explanation for the fact that not everybody seems to agree with the pro-fresh norm: "Maybe not everyone is able to taste the difference between fresh and ready-made, because they have hardly experienced the fresh variant." (Mary). Some one else highlights the financial aspect of buying (or not buying) fresh products: "I don't like sauces and soups in cans or dried. I prefer to buy biological vegetables and meat, because food is the last thing that I would economize on, but I can afford to buy good quality and not everybody can." (Phoebe). Taking both sides into account, the following quote pointedly summarizes the polarization: "It is impossible that people NEVER use pre-processed food or ALWAYS buy everything fresh. It looks like you are not allowed to say two things around here: (1) that you prepare everything yourself, including fish bouillon, and (2) that you eat a lot of canned and pre-processed food." (Julia).

The debate escalates when Tony searches for recipes by Brenda, who claims to make everything fresh, and finds an example that contains ready-made ingredients. Brenda states that she uses the ingredients that she freshly prepares, but that she suggested a pre-processed alternative in her recipe, because she knows that a lot of SmulWeb members don't prepare these ingredients themselves. She adds: "I find it very mean and unkind to quickly visit my homepage to search for evidence." But Tony continues saying that it is Brenda who is unkind by attacking someone who honestly admits to use ready-made products. Phoebe underscores this: "I do understand what you mean, but you make it sound like you know exactly what cooking well entails and that we only mess about." Brenda logs in under another (unknown) name and tells the forum that she will quit the forum, because every discussion ends identical with the result that the forum's good atmosphere has disappeared. The other discussants assume that it is Brenda right away and they react acquiescently to her announced goodbye. Some take it up to explain once more that Brenda should show some more forbearance towards people who use ready-made and pre-processed products instead of fresh. Tony, for example, writes: "I personally really detest home-made applesauce, but I love it when it's pre-processed and that's fine. Come on; don't let this discussion chase you away!" Phoebe adds: "You've always stated yourself that you should not be too sensitive when participating in this forum; you have to be able to handle some rumble." And Alice puts Brenda's announced goodbye in perspective: "What a lot of fuss; isn't this just the 310th time that Brenda leaves?" Brenda indeed leaves the forum for three days, but within a week her participation rate is back to normal again.

The underlying distinctions

The fresh versus ready-made debate comes forth out of two areas of tension between the forum participants. The first area of tension is caused by participants' differing levels of culinary involvement. Statements such as "I do cook, but not wholeheartedly." (Neil) and "I prefer eating over cooking!" (Amy) make clear that not all members of this culinary community are enthusiastic, dedicated cooks. In contrast, we have seen that several pro-fresh discussants characterize themselves as 'idealistic and passionate' cooks. Thus, some members simply take an interest in cooking, while others are truly passionate about cooking. Of course, it is inevitable that in a large community, as the one under study, variance is found amongst the members with regard to their experience in and commitment to the topic of interest (see Chapter 5). Problems arise when exponents from both sides declare their standpoint as normal and the other as abnormal. The following excerpts are good examples of how the participants dig in into their opposite trenches and polarize the distinction: "I've always had an interest in cooking, but it has never become a fanatical hobby. […] I simply don't have time, nor feel like spending half my days in the kitchen." (Betty); "It pisses me off when 'spending a lot of time in the kitchen' and 'always being a responsible cook [= using fresh produce instead of ready-made]' is beatified." (Rachel). The opposing view is represented by Brenda: "That's putting things on their heads. I put a lot a time and love into cooking and that's why I joined this community. Eventually I am a member of this community, because everything revolves around food or it should be like that. And to my delight, I do spend half the day in my kitchen. Now it looks like that is wrong." The fact that the participants give voice to the underlying distinction in terms of a strong conviction that is either followed or condemned indicates that the polarization is profound and fierce.

Tension also arises from lifestyle differences. The SmulWeb community covers a rich and varied member database. Also, the forum participants differ greatly in personal background. Men and women, older and younger, full and part time workers, housewives, pensioners, and students, single and married members with or without children, various nationalities, various levels of education, and various levels of affluence. As a result, the forum participants have different lifestyles and, also, different cooking habits and culinary preferences. That these differences sometimes cause tensions can be illustrated by a debate between nouvelle cuisine criticasters versus nouvelle cuisine lovers. One criticaster puts forward that quite some people force themselves to like exclusive products and gladly pay a high price, just because it's in fashion. Another participant supports this statement by pointing to 'haute cuisine': "Lots of people paid an enormous amount for three green peas and 25 grams of salmon and then visited a snack bar after a 10-course dinner in a restaurant." (Brian). A nouvelle cuisine lover rebukes: "I am fed up with this bullshitting about Nouvelle (not Haute) Cuisine. Everyone just points to the three peas instead of discussing the quality

of the 100 grams of fish or meat. Probably the quality is not recognized." (Alice). In this one comment, she corrects the label and the quantity that are mentioned by the criticaster, and she opposes herself to everyone who cannot recognize culinary quality. By doing so, she tries to prove her experience with nouvelle cuisine and show that she appreciates it for what it is, not because it is hyped. Another discussant adds to this that people who mention the three peas and tell the story about going to a snack bar afterwards obviously have never eaten in an exclusive restaurant. The reaction to this comment summarizes the perceived distinction well: "Well, I am just a simple farmer, who celebrates going to the McDonald's once a year. Excuse me for insulting the renowned Michelin star restaurant visitors!" (Brian).

The tension boils down to a distinction between forum participants who are able and willing to buy expensive (i.e., exclusive, high quality) products and ingredients and the ones who cannot afford it or who are not willing to pay more for products that have good-enough, cheaper (ready-made) alternatives. Thus, it is a matter of differing affluence and preference. The participants who buy expensive products and ingredients like to express their appreciation of the food they can prepare with it in the forum discussions. This triggers perceptions of 'snobbism' and 'showing off' by the participants who do not buy these expensive products and ingredients. Especially when discussants proclaim that they are passionate cooks AND propagate expensive, high quality food as the only right choice, the other camp feels downgraded and excluded. One discussant voices her frustration about this in the following way: "Sometimes I feel I don't belong here. I get the feeling that people want to outdo each other. When I read how easily people talk about buying things and preparing food and showing how good he or she is….bah. In the beginning I really looked up to the SmulWeb members and I thought gee, these are all very elite people, but by now I think they behave like that, but in the end they are ordinary people as well. I would like to have a peek in their lives to see how it really is." (Sharon).

This quote shows that the distinction is felt as a clash of social-economic classes in which the higher classes supposedly pride themselves on a better culinary taste (cf., Bourdieu [1979] 1996). The underdogs find that their opponents "act high and chic and they think they can know everything best" (Sharon). However, this last group dismisses this perception and states that "there is little boasting around here; some members simply are experts in the kitchen because of experience and experimenting and that shows in the way they write about it" (Julia). In the end we may conclude that both sides are to blame for carrying the distinction too far. The one group seems to be a bit jealous of other participants' lifestyles and culinary expertise, whereas the other group indeed seems to feel superior every now and then.

Reflection

Just like in the frozen food versus fresh produce debate, the forum participants come up with justifications for using canned, pre-processed, and ready-made products. It is often mentioned that in today's households of families with busy teenagers and working parents, there's limited time and energy that can be spend on cooking. One forum participant puts it like this: "Preparing fresh mashed potatoes for a family of five is neither easy nor quick." (Rachel). In these cases, cans and mixes are seen as a 'solution'; they can be easily kept in storage and efficiently prepared, also by the teenage kids. Preparing everything fresh obviously requires not only time and energy, but also knowledge and skill as one participant acknowledges: "I don't know on top of my head how I should prepare all the things that I buy in pre-processed form, like pesto and sambal." (Mary). However, few admit outright that they lack expertise. Many participants present an image of themselves that implies they would make everything fresh, *only if*. In this respect, some point to the difficulty of growing herbs that serve as the basis for products like pesto. Growing these herbs requires a lot of care, and since fresh herbs cannot be preserved long, it is not considered worth the trouble. In the same line of thought, frequency of product usage is put forward as a justification for opting for pre-processed instead of fresh. Home-made mayonnaise, for example, cannot be preserved for a long time, thus the participants consider it not worth the trouble of making it themselves, if it is not used often. Others stress that they would make more fresh sauces, soups, jams, et cetera, only if their kitchens (and houses) were large enough to store all the necessary equipment.

The norm to use fresh produce is pervasive. This is not only apparent in the justifications given, but also in the way that participants contextualize their usage of canned, pre-processed and ready-made products. For example; cans and mixes are only used during the winter, because in summer one eats vegetables from her own garden; cans and mixes are only used if one is tired after a day's hard work; cans and mixes are always used complimentary to fresh produce; cans and mixes are good to have in store just in case. An especially noteworthy contextualized justification comes from a participant who likes to prepare everything fresh. She tells the following story: "I admit, that not so long ago when my son and his wife and two kids paid me an unexpected visit, I quickly skinned a kilo tomatoes and borrowed some dried soup mix from my neighbor to make tomato soup filled with fresh veggies that I had still in the house. Everybody loved it, I only tried it for the taste, but I didn't eat it." (Mary).

The last trump that is played by the alleged barbarians in the fresh versus ready-made debate is the argument that home-prepared products do not always taste better than pre-processed products. An interesting take on this perspective is the notion that we are so accustomed to preservatives and additives that we no longer like the 'real thing'. One participant remembers: "I was raised on canned foods and ready-made products. My mother

was pretty lazy, she always used pre-processed foods and when she did make applesauce herself, we didn't like it." (Jil). The following story is also exemplary: "When we were newly weds, I wanted to treat my husband to home-made pea soup. I bought peas and soaked them overnight. I cooked them with crabs and fresh vegetables and used a real smoked sausage, so I thought: it's a perfect treat. After dinner, my husband tells me that it was tasteful, but that it did not excel his mother's pea soup […]. I did not leave it to that and asked my mother-in-law for her secret recipe. She turned red and didn't answer me. Later, when we were alone in the kitchen, she told me not to tell anyone, but I make it out of dried pea soup with a pre-packaged sausage. So you see, not everything that is really good, is fresh." (Sharon).

7.4.4 Celebrating Similarities

Up to now, the frames of discussion that passed in review might suggest that the forum is full of competition, debate, and contrasts. But despite the differences between the participants, they all share an interest in cooking and culinary matters. Moreover, they share the hobby to talk about their culinary interest, as manifested in their involvement in the SmulWeb forums. Consequently, many discussion threads are joyful accounts of recognition and identification. The participants truly celebrate their similarities with respect to cooking and eating habits. These discussions often refer to the past; participants recount how they learned to cook or what they used to eat when they were younger. As such, the forum participants construct a shared past that reinforces their community spirit, despite nowadays' differences. The following analysis gives an account of these celebrations of recognition and community. We conclude with a reflection upon one particular celebration of similarities, i.e., confessing secret passions.

Learning how to cook

Every hobby has a trigger. Interest for culinary matters and cooking is no exception to this rule. By exchanging stories about first cooking experiences and culinary tutors the forum participants heighten their sense of similarity and community. These stories function as signs of a shared initiation ritual that has been the starting point for an increasing interest in culinary matters and that has eventually resulted in membership of the same community. Because cooking and eating are such ubiquitous elements of our lives, it is not surprising that all participants have childhood cooking experiences. Some have very early childhood memories of assisting in the kitchen: "I was a very young girl when I stood on a stool at my grandmother's and stirred in the soup and was allowed to add the vermicelli and meatballs. I must have been no older than four years." (Sarah). The stories recount how some were forced to help out in the kitchen and how they were assigned cooking tasks, usually out of necessity,

while others assisted more voluntarily: “Ever since I was a small child I have seen cooking as a hobby. At first I had to help my mother out, because she was busy with work. But cooking was no punishment, on the contrary! I always observed how my mother prepared dinner.” (John); “I think I was nine or 10 years old when I had to help my mother in the kitchen, making mayonnaise, et cetera.” (Harry); “My mother taught me how to cook: as a six-year old I already sat in the kitchen of my parents’ restaurant and watched, tasted, and ‘helped out’ during the day.” (Donna); “I always watched when my mother was cooking and around my tenth birthday I prepared meals myself. I liked doing that, but my brother and sister didn’t care about cooking and nowadays they still can’t cook well.” (Mathew). These discussants have fond memories of their mothers as culinary tutors; however, that is not the case for everyone.

In contrast to these stories about the archetypical mother who cooks and cares well, many forum participants recount stories in which their mothers figure as bad cooks, who did not teach them anything about culinary matters. Sharing memories about her horrible cooking qualities or her indifference towards cooking becomes another way of celebrating similarities and establishing a shared initiation ritual. After all, these forum participants have in common that they became enthusiastic culinary experts, not because, but despite of their mothers: “I haven’t picked up anything from my mother. I had to learn it all by myself. My mother worked, she still does, and didn’t have time. I was lucky to be in a school for household education. I have learned a lot there and for the rest I taught myself.” (Geena); “My mother couldn’t cook at all, I mean, she couldn’t prepare a tasteful dish.” (Mary); “I definitely don’t want to cook like my mother, my family would hate me if I would cook like her. My mother can’t cook tastefully […]. I was glad to leave home when I was 17. From that moment I gained quite some weight, because everything tasted so much better than at home!” (Clair). The participants who lacked a culinary mother have taken others as an example: “I saw how it was done at my grandmother’s. She dared to experiment.” (Nicole); “I copied the mother of my first boyfriend and I still prepare things like she did. At home I didn’t learn how to cook at all.” (Susan); “When I met my first husband, who studied at the hotel school, I was introduced to the restaurant business and learned how to cook. My first husband left, but my love for cooking has lasted.” (Brenda).

It is noteworthy that quite some forum participants mention their (grand-) father as the person who raised their culinary interest and who taught them how to cook. These learning experiences are usually less fondly remembered compared with the ones in which the mother acted as a tutor. However, the appreciation for everything that is learned seems to be bigger when taught by a male family member. Presumably, this can be explained by the fact that fathers usually only cooked for special occasions, thus when the dinner was more elaborate and culinary challenging: “When you turned seven you were included in my father’s

cooking-for-the-weekend schedule. There were two requirements: [you had to make] a lot of soup and various desserts. Dad supplied the chicken for the soup and the first weeks the master took it upon himself to supervise you (which was not a lot of fun). But you did learn to improvise. […] From this simple menu, dad took us through the wonderful world of food and especially food preparation." (Andrea); "Cooking and baking was also my father's hobby. Every weekend he cooked for our family. This was a great relief to my mother who cooked mediocre and without any inspiration, because she couldn't care less about it. His meals were always great and special, but the kitchen looked like a battlefield afterwards, because he used five utensils when he could have used just one and he left it to his three daughters to clean and do the dishes, much to our annoyance. […] In the end, his cooking interest did pass on to all three of us." (Betty); "I have certainly taken, or inherited, my interest in cooking from my grandfather, because my mother found it unimportant. My grandfather made complicated dishes and I had to help him for hours. You don't appreciate that when you're nine years old, but now I am glad." (Mary); "My parents had a café and served all sorts of snacks. My father's sateh was citywide famous, people came especially for that. I still make the sauce exactly like him. […] I have inherited my father's cooking pots and his culinary interest as well. My mother always cooked during the week, but the special dinners were prepared by my father." (Kate).

From the previous excerpts it becomes clear that the forum participants perceive their culinary interest to be an inherited talent, i.e., particularly in the atypical case of having a father who cooked well and with pleasure. It is therefore not surprising that the participants frequently exchange stories about the excellent cooking qualities of their own (grand-) children, who, in turn, have taken after them with respect to their interest in cooking: "I have a little chef in the making. She is only five, but for over a year now, she has helped me cutting, peeling, stirring, and kneading. She really enjoys it and proudly says 'I have made that'." (Donna); "When they were around 12 years old, my kids started to help me in the kitchen. One of them has become a chef, so much fun it was to help his mum." (Linda); "Our son was only five years old when he helped already out in the kitchen. He washed and cut the vegetables and cleaned up everything very neatly. The same goes for our grandson, who continuously asks 'why do you do this and why do you do that.' He always wants to taste whether it is good and he helps cleaning and doing the dishes." (Peter); "My two youngest daughters are true chefs." (Brenda). Also these narratives function as community builders. By representing culinary opinion leadership as a quality that is passed on from one generation to the next, the discussants portray an ongoing lifecycle that secures the continuous existence of the community. This gives more weight and importance to the discussants' community membership; they share an interest and passion not only with each other, but also with cooks of the past and the future.

The meal preparation process

The daily dinner is a recurring topic that is addressed in many discussions. Forum participants exchange stories about dinner preparation and dinner table habits as a way to express their common interest in and enthusiasm for cooking. These stories function as points of recognition; similar habits strengthen the mutual tie and sometimes they are used to set the community of culinary enthusiasts apart from the masses of ordinary cooks. For example, one forum participant asks the others whether it is normal to drink some alcohol when preparing dinner. People in her circle of acquaintances disapprove of this habit and now she looks for backup in the community of like-minded culinary enthusiasts, who supposedly also 'spend more time in the kitchen for certain dishes'. The reactions leave no doubt as to whether it is considered normal of not: "I think it is completely normal to drink a glass of wine, sherry, port or Dutch gin during cooking." (Alice); "It is very normal. I would say: cheers!!!" (Linda); "A splash [of alcohol] for the dinner and a splash for the cook!" (Emma); "In the weekend, during holidays and for special occasions, I usually add wine or port to my dishes. Delicious. And when you are pouring, you might as well pour something for yourself. After all, you want to make sure that you use good wine/port for your dishes!!!" (Nick).

In another discussion one participant puts forward that he finds it strange that his relatives have fixed seats at the dinner table. The other participants, however, do not share this perspective. There is hilarity all over when it turns out that the discussants en masse have fixed seats in their households: "I have a fixed seat and my kids used to argue about who was allowed to sit next to me, so we had Anna-day or Lisa-day according to whose turn it was." (Nicole); "Here it is exactly the same: Jerry-day or Steven-day." (Alice); "We also have our own spot at the table; I sit close to the kitchen so that I don't have to walk far." (Peter); "I have a fixed seat except when we have guests, because then I sit closer to the stove." (Kelly); "At my house we all have fixed seats and I don't even give up my seat when we have guests" (Amy). Several participants point out that the fixed seating is not limited to the dinner table: "Here everyone has his own seat at the table and on the couch." (Sharon); "In my local bar I also have a fixed seat and in the restaurants that I visit regularly I have a fixed seat as well." (Harry). The discussion starter reacts amused: "And I thought all the time that my relatives were strange, lol! [= laughing out loud], but now it turns out that I am the one who is strange, because I don't care at which spot at the table I am seated." (Neil).

Although the stories might seem trivial and insignificant, they tell us a lot about the lived everyday experience of consumers that we usually do not know beyond their purchasing behavior. As such, analysing these stories might reveal marketing opportunities so far unrecognised. The reactions to the question whether it is normal to drink alcohol while cooking are not only overwhelmingly supportive, but also give evidence of the circumstances

under which dinner is prepared. For most of the discussants cooking is a social happening and drinks are part of the game as illustrated in the following descriptions of daily dinner preparations: "When I come home after work, I pour myself a glass of wine and start cooking. Sometimes my husband joins me in the kitchen. Also my kids and friends don't have to leave the kitchen when I cook. Everyone just sits down to the kitchen table, very cosy." (Andrea); "I have a tiny kitchen, but there is just enough space for a small stool for my husband. Very cozy, drinking wine, chatting and cooking. After a long day at work I find that extremely relaxing!" (Emma); "Actually I always drink while I cook, be it water, a glass of wine, or some liqueur and everything in between. My kitchen is large enough and everyone may keep me company. There is also a television, radio, mini-computer, a table and two chairs, so my kitchen has many conveniences." (Carol). These descriptions might serve well as a starting point for an advertising campaign for dinner food products or kitchen design and furnishing.

In another discussion about dinner preparation circumstances, one participant puts forward that he cooks (even) better when he listens to the radio at the same time: "It is really true that I am much faster then and that I am successful in practically everything I prepare." (Neil). Several participants recognize themselves in this story: "With the radio on I cook better too!" (Susan); "For me it's the same: salsa, or zouk, or reggae, or Caribbean sing-alongs by Sparrow." (Carol); "When I am in the kitchen I can hear my husband playing the piano, which gives an extra stimulus." (Emma). However, the discussants point out that music is not always stimulating, but that it can also be distracting, especially when concentration is required: "I listen to the radio, but don't ask me the title of the song, because that I don't hear. The same with news items; I only hear these when I am cleaning up. And if I am experimenting with a new dish then I turn off the radio and banish everyone from the kitchen." (Carol); "I don't [listen to the radio while I cook]. Nothing may distract me. Yes, when I am cleaning up I sing along at the top of my voice." (Nicole). Finally, the discussants exchange some of their favorite 'cooking songs'. Again, this discussion offers a marketing opportunity. What about putting together a cooking CD with appropriate (stimulating yet not distracting) songs chosen and approved by culinary enthusiasts like the forum participants or, better yet, well-known professional cooks?

Reflection

The forum participants have fun finding out that they share specific cooking habits. Nevertheless, the level of recognition and identification rises highest when they talk about their love for food and eating. This is something that they truly have in common and that overcomes all personal and situational differences. In celebrating this similarity the participants go as far as engaging in self-disclosures about behavior that they would probably

hide from others, i.e., they tell each other about how and when they overly indulge in eating. In our society this kind of behavior is often stigmatized; if you cannot control your food intake you are presumed to have an eating disorder or an addiction. Consistent with this perspective, the metaphoric language used for these self-disclosures describes the yearning to eat as an attack that overtakes control and that is hard to resist: "It is not that I wake up at night and engage in indecencies, but eating late at night and then really gross, yes, that I do. Just now, 1.30 A.M., I have ripped open the filet américain and ate it with sweet-and-sour." (Kevin); "The later at night, the more gluttonous. I would easily make a bouillabaisse at night. But I try to restrain myself."(Brenda); "I am often awake at night for my work and sometimes I get a real hunger attack and then I stuff myself with everything I can lay my hands on." (Tony).

Although these excerpts present the yearning for food at night as an attack, as gluttony, and as something close to an indecency, the forum participants also happily exchange their nightly favorites. By doing so, they celebrate their nightly appetite as a sign of shared fondness of food. Within this community of like-minded culinary enthusiasts, feelings of delight for indulging in eating may exist next to feelings of guilt. Moreover, they may even beat them! "We call it the kick of a voracious appetite and if it happens at night I just dive into the kitchen. It doesn't happen too often, but if it does we don't shun a large steak with mushroom sauce." (Susan); "I love to eat toasted sandwiches at night, or an omelet. And after going out I have fries with mayonnaise or a sandwich with herring. Delicious!" (Donna); "Yummy, toasted sandwiches are indeed very good; I sometimes prepare some after work at 5.30 A.M. or I fry some eggs, fill in my paperwork and then go to bed." (Tony); "I always have sea-snails in the freezer and I love to eat them at night when I yearn for some food. […] Just now, I have prepared crème brulée, without brulée but with blueberry sauce and some whipped cream instead, for my husband. And I finished a piece of very old cheese." (Brenda, at 1.30 A.M.); "I just ate a chunk of old cheese, delicious. I don't care about what time it is when I eat." (Sophie, at 3.00 A.M.); "I just satisfied my night hunger with a pile of macaroons and my all time favorite cheese for at night is farmers' cheese with holes." (Emma, at 22.45 P.M.).

The drawback of a nightly appetite is an empty freezer in the morning: "Sometimes we could finish the herrings at night and then my herring recipe for the next day had to be cancelled." (Susan); "Last night it was a bit later than usual [before I went to bed]. So what do I do around one o'clock? I drank the onion soup, cold. And I ate filet américain, with the result that it is finished now." (Kevin) – "That is too bad for your breakfast!" (Mary). Eating the ingredients for next day's meals oneself is a secret enjoyment, but the forum participants find it less amusing when their family members turn out to be smart food snatchers: "Every morning when I get up half of the bread has suddenly disappeared together with much of the

filling. I get tired of it!" (Nicole); "When I still worked and occasionally prepared something for my colleagues, I always had to hide it. Otherwise, a pizza, for example, would have turned into a small slice of toast by the next morning." (Brenda); "When the kids still lived at home our fridge was always plundered during the weekend; after going out they would fry eggs with bacon, toast sandwiches, bake potatoes, et cetera." (Sean). Several participants can also lose their temper over the excuses that their family members make for snatching food: "I was on a holiday with my husband and I had prepared boiled eggs. We were going to hike and I wanted to bring my egg, which I had not eaten yet, as a snack for along the way, but the egg was gone. My hubby thought that it was better to eat it, because it might turn bad. We had a fight for hours over that egg." (Brenda); "I recognize that 'yes, I ate it because I thought it would go moldy' and we have lots of fights about that too." (Alice).

The discussants share the tricks they use to avoid plundering: "I always hide the freshest cheese in the vegetable compartment, otherwise it is cut into and then I keep grinding the remainders of the other, less fresh cheese for sauce or gratin." (Mary). However, these tricks are not always successful: "In my household the cheese is almost always gone. […] So, I have tried to hide a chunk in the back of the freezer, but that has also been discovered and snatched away." (Alice); "I have master spies in my family with respect to food!" (Nicole); "My wife hides chocolate for me, she thinks…☺" (Kevin). Maybe these tricks work the wrong way round, as one discussant puts it: "There is nothing better than food that is hidden." (Emma). Instead of hiding the snacks that are popular to appease a craving for food with, there are also other tricks to avoid giving in to an appetite: "I only buy cookies when I know that guests will come over. If I buy them for no reason, then I know I'll eat them all in no time, because I am a sweet tooth." (Susan); "I try to buy 'wisely' by choosing for these horribly delicious raisin biscuits [that are less unhealthy than butter cookies], and then I only take one. Or maybe two, no, three... Sometimes I buy these pim's [cookie brand], with chocolate and orange filling, since I don't like them myself." (Emma); "This is exactly the way my wife does it; she buys stuff that she doesn't really like herself in order to have something in storage if we have (unexpected) guests." (Brian). Just like the stories about cooking habits, these stories about appetite attacks and plundering preventions may serve as a starting point for a package innovation that builds on the idea of a camouflage color or an advertising campaign recommending a product that is appetizing, but not temptingly delicious and therefore perfect to keep in store for visitors.

7.5 DISCUSSION AND CONCLUSION

7.5.1 Forum Interaction Dynamics

The opening quote of this chapter presents Kozinets' statement that netnography is a stand-alone method to track and analyze the market-related behavior of consumers participating in virtual communities of consumption (Kozinets 2002a). Rather than labeling the netnography a stand-alone method, we'd like to highlight its synergy with the online survey and the holistic understanding that can be gained from their combined use. The netnographic analysis of forum discussions has contributed to a richer and deeper understanding of the process of interpersonal influence online. In the first place, we have gained insight in the interaction dynamics between participants in online discussion forums. Our analysis has revealed four main frames of discussion, which classify the communicative acts that the discussants engage in according to their overall goal: (1) sharing knowledge, (2) negotiating norms, (3) opposing values, and (4) celebrating similarities. These labels do not only exemplify the aim of the online forum discussions (to share, negotiate, oppose, and celebrate), but also what is at stake (knowledge, norms, values, and similarities). This categorization is valuable for researchers and marketers alike, because it highlights the complexity of online forums as sites of interpersonal influence between consumers. It is not just about information exchange related to specific purchase decisions, but community members engage in far more encompassing communicative acts to define, negotiate, argue, and cheer about value systems surrounding cooking and eating.

Furthermore, the categorization underscores the unique character of the virtual community that serves as a reference group compared with its real life counterparts. Within SmulWeb, we find a large variety of members that diverge in terms of age, education, income, nationality, household and professional situation, living standards, et cetera. The analysis of forum discussions has made clear that these distinctions, and the resulting differences in opinion and behavior, are an integral part of community life and member exchange. The differences play up in normative discussions about cooking and eating; sometimes a shared standard is reached (e.g., deviating from the traditional Dutch dinner composition is accepted as long as one adds fresh vegetables to the alternative meal), sometimes discord continues (e.g., mashed potatoes are best prepared with a pestle or passé vite), and in some instances sides are polarized (e.g., in the fresh versus ready-made debate). Although tensions may rise high, in general, the forum discussants find ways to strike a balance between that what opposes them and that what binds them by alternating negotiations and fights with celebrating similarities. Within the community of like-minded culinary enthusiasts, they even dare to disclose their cravings, their overindulgence, and their secret enjoyments with respect to food and eating.

In a real life culinary community, for example a cooking club, culinary society, or wine course, it is not likely that people from such diverging backgrounds would come together due to practical and ideological barriers. The ongoing interactions between Dutchmen and Belgians, between 'culinary barbarians' and 'bon-vivants', between Nouvelle Cuisine lovers and Nouvelle Cuisine haters, supposedly, only occur online in a context in which many personal and situational differences are not directly apparent (e.g., income) or relevant (e.g., country of residence). Moreover, the relative anonymity of the computer-mediated environment and the fact that members can leave the community whenever they want, contributes to an open atmosphere that results in confessions and disclosures about behavior that is normally hidden from public scrutiny. In real life, people tend to uphold their decorum; online, amongst people that share and understand their passions, the forum discussants let go of this decorum and bond with each other by confiding shared bad habits and rituals.

Altogether, this makes the online community a more diversified, informative, and, in some respects, unifying reference group than the average cooking club or culinary magazine. Members are actively stimulated to broaden their scope, because they have to share community space with members who share a passion or interest, but who also have differing opinions and behaviors. In the process, they engage in communal celebrations of their like-mindedness and homophily to mark their unity, while they learn from and are influenced by each other's differences.

7.5.2 Insights in Consumer Behavior

The second contribution of our netnography to consumer research is the specific insight it has generated about (1) the knowledge, norms, values, and behavior of the forum participants with respect to cooking and eating; (2) the tactics that the discussants use to relate to and influence each other's knowledge, norms, values, and behavior. These insights are relevant for various interest groups, such as marketers and advertising agencies, producers of food products and kitchen appliances, restaurant keepers, nutritionists, and community managers. In the remainder of this paragraph, we will highlight several interesting findings and discuss the related implications and opportunities for the relevant interest groups.

Cooking and eating

One of the most revealing topics that frequently recurs in the forum discussions is the fresh versus ready-made debate. This debate is so interesting, because it brings to light differing value systems related to cooking and eating. For a long time, ready-made, pre-processed products were generally considered inferior to fresh products. They were the choice of working mothers who did not have time to take proper care of their families (e.g., Reilly

1982; Reilly & Wallendorf 1987). Still, the notion of inferiority prevails amongst the forum participants; for example, ready-made products are only kept in store for convenience in case an unexpected meal has to be prepared. Nevertheless, the discussions also show that the opposing attitude gains ground. Discussants point to the freshness of frozen food, to the fact the top chefs use pre-processed products, to how they use ready-made products only in combination with fresh ingredients, to the efficiency of starter kits for meals in case less culinary proficient family members (husbands, kids) have to prepare dinner. It is noteworthy that some of these justifications and contextualizations have also been put forward by advertising campaigns for frozen, ready-made, pre-processed foods, or starter kits for meals. Thus, the fast moving consumer good industry has succeeded in reaching an audience and catering a market (cf., Scholderer, Bruno, Grunert, Poulsen & Thogerson 2001).

By closely monitoring the recurring fresh versus ready-made debate within the forums, marketers might develop new insights in how to market fresh and/or pre-processed food products. Fresh produce is associated with truly delicious and tasteful food. Thus, it meets the end of the bon vivant, who fully wants to enjoy life. Fresh produce is, furthermore, associated with nutritious food, thus meeting the end of the caretaker, who secures the welfare of her family. However, fresh produce is also associated with investing valuable time and energy needed for growing, harvesting, processing, and preparation. Associated with this consequence, using fresh produce inhibits enjoyment of other activities that could be undertaken instead, such as practicing a profession or spending time with one's family and friends. Thus, the same product attribute, freshness, can be linked with various consequences and values depending on the individual and the situation. Understanding when what matters to whom is the key to propagate inclusion of fresh ingredients in the daily dinner (also relevant for nutritionists!), or to successfully market ready-made, pre-processed, or frozen products as an alternative.

Concrete marketing opportunities related to the fresh versus ready-made debate can be found in the related discourse. Discussants talk a lot about honesty; they 'admit' to use ready-made products. An advertising campaign that picks up this discourse appeals to an emotion that is very self-relevant, thus, its potential to attract attention and evoke a reaction is high. Furthermore, the discourse is filled with references to taste. Two interesting notions are put forward; 'we are no longer able to appreciate the pure taste of fresh produce, because we are so used to the pre-processed variant', versus 'the taste of pre-processed products sometimes simply outdoes the taste of fresh products'. Both notions can be used as the starting point for developing marketing campaign messages. Another very concrete marketing opportunity that follows from the fresh versus ready-made debate is the discussants' excuse for not preparing everything fresh by pointing to a lack of space to store all necessary equipment. Producers of kitchen appliances may take this as a lead to develop

space-saving utensils. In any case, they better make sure that the space-issue is addressed in their marketing communications.

A second informative discussion topic is the issue of a healthy diet. Compared with the fresh versus ready-made debate, the forum participants are much more in accordance with one another on what constitutes a healthy diet and on how the norm should be put into practice. Nutritionists may be happy to learn that the norm of eating 200 grams of vegetables every day that is propagated by the government is well absorbed and generally adhered to. However, forum discussions make clear the participants find it much harder to keep to the norm of eating two pieces of fruit daily. A campaign about healthy eating habits could address ways to facilitate fruit intake, for example by providing recipes with fruit or pointing out in which cases fruit can serve as an alternative for other food products.

A valuable insight for marketers and advertisers related to the healthy diet discussions is the ways in which forum participants justify eating proclaimed bad food products, such as cookies, pizza, French fries, and other fat foods. It seems that the discussants have at their disposal two tactics. The first is to rearticulate the bad food into something that is not so bad after all. The second tactic is to compare the bad food to something even worse. Marketing campaigns could build on these tactics when deciding on a positioning strategy. Furthermore, the discussions have also revealed the joy with which participants can indulge in eating fat foods and the extra appeal of hidden goodies. Thus, in contrast, marketers could also stress the pleasurable and forbidden side of the proclaimed bad foods to increase their attractiveness.

A third interesting issue that has implications for several interest groups is the importance attached to simple dishes and pure taste. Whereas the discussions about a healthy diet more or less reflect consumer behavior at large, the discussions that address simplicity and pureness make clear that the forum participants consider themselves different from the general public. As culinary experts that are able to appreciate ‘the real thing’, they don’t like restaurant dishes to be dressed up with all sorts of extras. Thus, if restaurant keepers want to attract them as clients, they should stress the pure quality of their menu. However, this strategy should be carefully chosen in order not to chase away clientele that appreciates these fringy dishes.

As culinary experts, the forum participants also state that they are able to appreciate natural and biological products for their pure taste. They denounce opting for these products out of fear for contaminated, industrialized products, or just because they are ‘in’. If advertisements or governmental information campaigns are focused on these arguments, they may lose this group’s interest and even induce feelings of skepticism about the true

intentions of the claims. Nevertheless, for other consumer groups these arguments hold significance and, thus, they can be successfully used to appeal to them.

Tactics to influence each other

In our analysis, we have reflected upon several of the tactics used by the forum participants to relate to and influence each other. One discussion tactic to influence each other stands out, because it entails important implications for addressing the community members in general and/or the forum participants in particular. To convince others of their expertise, discussants call upon authority. Our analysis has made clear that authoritative sources have differing levels of impact (cf., Harrington & Bielby 1995). Natural authorities, e.g., members who provide information about the local cuisine of their hometown, exert most profound influence. When it comes down to it, forum participants shunt off information retrieved from the traditional media, the Internet, the government, and scientific sources, in favor of information that comes from community members. This has implications for deciding on who will be the most effective spokesperson for a marketing or governmental information campaign. Since a large percentage of the forum participants belongs the group of core members that is characterized by a relatively low education level, we should be aware of the fact that other community members, and people that do not participate in the community, may attach more importance to other than consumer experts. Nevertheless, this finding underscores the importance attached to the knowledge and experience of other consumers in contrast to the perceived value of marketer-generated information, as has been established by other researchers in other contexts (cf., Price & Feick 1984; Swartz & Stephens 1984; Herr et al. 1991).

Tactics to influence each other do not only pertain to consumer knowledge and behavior with respect to consumption activities, tactics are also developed to influence each other's behavior within the community. SmulWeb's administrators do not exert any control over the contributions made to the community. As a result, community members have to develop the rules of the game by themselves. The forum discussions make clear that the discussants, in general, want to play the game by different rules than a majority of other community members; the first focus on quality, whereas the last focus on quantity. In essence, this conflict represents the differing interests and needs of the core members versus (several) other member types. The tactics developed by the forum participants to set the norm vary from innocent and effective (pointing out the unwritten standards to newcomers) to aggressive and disturbing (prosecuting members who deviate from the norm by publicly denouncing their behavior as against juridical law). Community managers should be aware of these interaction dynamics and decide about when and how to intervene to prevent commotion and unrest disrupting the community. The light-hearted warning introduced by

members as a way to set a standard has proven to be a good alternative in the SmulWeb community.

7.5.3 Concluding Remarks

The four frames of discussion revealed by our netnography are not exhaustive. We have only focused on discussion threads that were relevant in the context of the overall objective of this dissertation, i.e., understanding what role virtual communities play in the consumer decision process as sites of interpersonal influence between consumers. In particular, we have limited our analysis to topics about cooking and eating. This means that, for example, small talk discussion threads were left out of consideration. Including this kind of discussions might have generated another discussion frame, such as 'establishing friendships' (cf., Utz 2000). Again other discussion frames might be found in other types of virtual communities, e.g., 'giving support' in online health forums (cf., Laing et al. 2004), 'closing deals' in transaction communities (cf., Hagel & Armstrong 1997), and 'determining power' in MUDs (cf., Reid 1999). Nevertheless, with respect to virtual communities of consumption and their relevance for marketing academics and professionals, the four discussion frames revealed by our netnography cover the most important and interesting interaction dynamics. We expect to find these discussion frames in many online forums devoted to market-related consumption activities. However, future research should test generalizability, and maybe include other main categories.

The insights in consumer behavior that are generated by this netnography may serve as a starting point for developing new products, determining positioning strategies, and devising advertising campaigns. However, each issue warrants further research; other sources and research methods should be used before conclusive marketing recommendations can be made. Special attention should be given to the generalizability of the shared consumption meanings and practices across other groups than the convenience sample of forum discussion contributors that were included in our research. After all, our conclusions are only based on a subset of 82 discussants out of a database consisting of approximately of 175,000 members. Nevertheless, the average amount of subjects studied in qualitative research is usually much smaller than our subject pool (cf., 65 subjects in Kozinets 2002a; 32 respondents in Thomson & Troester 2002; 35 subjects in Jensen Schau & Gilly 2003). Studying interpersonal influence between 82 subjects in a real life setting would be practically impossible. As we have established, these discussants primarily belong to the group of core members that stand out because of their involvement in the community and their expertise about the community's topic of interest. Their opinions and behavior do not necessarily have to reflect the opinions and behaviors of other consumers, but they are likely to serve as a source of inspiration and reference. Further research is needed to examine their reach and impact.

The netnography of SmulWeb's discussion forums is a content analysis performed by one judge. Thus, there is no inter-coder agreement assessment of content validity of the themes and of the reliability of the interpretation of the discussions. Instead, validity and reliability are assured by strictly following the procedure for sound netnographic research proposed by Kozinets, among others by eliciting feedback from members. Taken the limitations of a single judge analysis into account, the netnography has, overall, proven to be a valuable tool to explore the underlying processes of consumer decision-making and buying behavior. The richness of the information retrieved and the unobtrusive way in which it can be obtained make this method extremely useful for idea generation. It has revealed a varied landscape that has offered us a lot of interesting vistas, inviting further exploration. Before we turn to the final concluding chapter in which we will expand on some of these avenues for further research, we sum up the main takeaways of the netnographic analysis;

1. Within online forum discussions participants exchange much more than factual information related to specific purchases or consumption experiences. Their communicative acts can be classified into four main frames of discussion: (1) sharing knowledge, (2) negotiating norms, (3) opposing values, and (4) celebrating similarities.
2. Even though the forum discussants belong primarily to the same member type, they come from different consumer segments with diverging lifestyles. Discussants are actively stimulated to broaden their scope, because they have to share community space with members who share a passion or interest, but who also have differing opinions and behaviors. In real life reference groups, this diversity is not likely to be found, because birds of a feather flock together.
3. The forum discussions have brought to light that community members actively try to influence each other's knowledge, attitudes, and behavior; both within and outside the community. With this, the relevance and reach of virtual communities as sites of interpersonal influence that connect a diversity of consumers is indisputably demonstrated.
4. The netnographic analysis of forum discussions has generated meaningful insights in the differing and shared value systems of the discussants with regard to cooking and eating. Although further research is needed to examine generalizability, all these insights offer relevant leads for various interest groups to better address consumers' needs and wants.

Chapter 8

Conclusion

8.1 INTRODUCTION

The focal point of interest of this dissertation is a phenomenon that has attracted increasing attention from marketers and academics alike: virtual communities of consumption. In these communities, geographically dispersed consumers exchange information and share experiences about a particular consumption activity. As such, virtual communities have turned into substantial and influential sources of information. This dissertation specifically addresses the topic of interpersonal influence within virtual communities of consumption. Despite the growing interest in virtual communities and their ability to influence members' knowledge and behavior, systematic research into this issue is lacking. Therefore, this dissertation has taken a broad and exploratory perspective addressing various aspects of virtual community participation and its effect on consumer decision-making. In particular, three studies form the core of its contribution:

(1) *Interpersonal Influence Online; Virtual Community Influence on the Consumer Decision Process*. This study systematically investigates which factors are associated with virtual community influence, thereby making use of existing theories about reference group influence and word-of-mouth recommendation to test in what respect these theories can be extended from the traditional to the computer-mediated context of virtual communities. Not only are the differential effects on various phases of the consumer decision process investigated, but community influence on consumer decision-making is also compared for various decision processes.

(2) *Patterns of Participation; A Classification of Virtual Community Members*. This study takes as starting point the widespread conceptualization of community members as either active contributors or passive lurkers. Based on patterns of visit frequency, visit duration, and supplying, retrieving, and discussing behavior, it offers a richer typology of virtual community members that allows for a better understanding of the various member segments and their underlying constellation. Each member type is profiled on additional variables relating to membership and

general consumer characteristics and the extent of community influence on decision-making is compared across member types.

(3) *Frames of Discussion in Virtual Community Forums; A Netnography of SmulWeb*. In this study, we analyze ongoing forum discussions that are mainly generated by the community's core member group. On the basis of an unobtrusive netnography, we get an in-depth understanding of the values underlying consumer behavior related to the community's topic of interest, and in how these values are formed and adapted through interpersonal contact. In an iterative process of data collection, interpretation and member checks, our analysis has resulted in a categorization of four distinct frames of discussion. For each frame of discussion we have addressed the most prominent themes and the accompanying discourse.

The present chapter summarizes and expands on the main findings of these three studies and discusses the implications. Furthermore, the limitations of this dissertation are addressed. Finally, an agenda for future research is put forward.

8.2 FINDINGS

In the introductory chapter of this dissertation, we have put forward that there is substantial anecdotal evidence that email lists, bulletin boards, discussion forums, chat rooms, and the like, influence consumer knowledge and behavior (e.g., Rheingold 1993; Jolink 2000; Oostveen 2001). Also various research papers suggest that virtual communities act as important reference groups for their individual participants (e.g., Kozinets 1997, 2002; Bickart & Schindler 2001; Rothaermel & Sugiyama 2001; Chevalier & Mayzlin 2003). Nevertheless, this dissertation is the first to systematically examine participation in virtual communities and the effects on consumer decision-making. Table 8.1 summarizes the main findings of the three studies reported in this dissertation. Based on these results, and bearing in mind the existing theories about reference group influence and word-of-mouth recommendations that we have discussed in Chapter 3, what can we conclude about the functioning of the virtual community as a reference group?

The first conclusion that we can draw is that **SmulWeb indeed acts as a reference group for its members**. Although they use the community in different ways, all survey respondents report that, together with cookbooks, it is their most important source of information with respect to cooking decisions, i.e., they value SmulWeb more than family and friends, papers, magazines, the broadcast media, and other Internet sources. If we consider the breadth and

Table 8.1
Summary of the main findings

Method	Findings
Chapter 5	
• Online survey • 1007 respondents • Regression analysis	• VC is valued high as an information source for frequently recurring consumption decisions. • VCI on CDP is profound, especially in the information search and pre-purchase evaluation phases. • Main determinants of VCI are social involvement, frequency of visits, amount of information retrieved, susceptibility to normative influence, and being an opinion seeker. • VCI on decision processes that are characterized by a higher degree of complexity and risk is less profound and associated with a limited number of determinants.
Chapter 6	
• Online survey • 1007 respondents • Cluster analysis	• We may distinguish six member types that significantly differ with respect to their participation pattern, as well as key membership and general consumer characteristics. • The member types can be put in an imagined circle that represents the community. Core members (6%) are in the middle. The next ring contains conversationalists (10%), informationalists (14%), and hobbyists (17%). Functionalists (28%) and opportunists (25%) are located at the periphery. Information exchange and community influence is high in the center and diminishes further towards the periphery • The circle contains three spheres of orientation. Informationalists, functionalists, and opportunists are oriented towards facts. Conversationalists are oriented towards interaction. Hobbyists are oriented towards recreation. Core members combine the three orientations.
Chapter 7	
• Netnography • 53 threads • 3163 postings • 82 contributors	• Within online discussion forums, participants exchange more than factual information related to specific purchases and consumption experiences. Four main frames of discussion can be distinguished: (1) sharing knowledge, (2) negotiating norms, (3) opposing values, and (4) celebrating similarities. • Forum discussions exemplify the diversity of the community in terms of the different consumer segments it brings together. Discussants actively try to influence each other's diverging knowledge, attitudes, and behaviors. • We have gained insight in various differing and shared value systems with regard to cooking and eating.

VCI = Virtual Community Influence; CDP = Consumer Decision Process.

depth of the community's recipe database that contains over 200,000 recipes stored in a digital archive that can be searched on key words, the informational value of the community, compared with family, friends, papers, magazines, and the broadcast media, is apparent. As a reference group, the virtual community outdoes other reference groups in terms of quantity and accessibility of information, but, as we have seen in the forum discussions, the quality of the information is not quaranteed. Nevertheless, it seems that most respondents put up with this and value the virtual community for what it is: an unedited and unsensored digital database of comprehensive consumer knowledge.

Furthermore, we have demonstrated that **the community not only serves as an information source, but that it actually influences consumer decision-making**. Although our findings relate to self-reports of perceived community influence and therefore cannot be taken as conclusive evidence that the community has changed consumer knowledge and behavior, it indicates that people take the information that they retrieve from virtual communities into account. Furthermore, we are the first to establish the extent of perceived community influence on the phases of need recognition, search for information, pre-purchase evaluation, and post-purchase evaluation of the consumer decision process. We have found that community influence manifests itself most profoundly in the information search and pre-purchase evaluation phases. Community influence on the need recognition and post-purchase evaluation phases is limited, i.e., consumers are less likely to engage more frequently in the community's focal consumption activity, or to be more satisfied with related purchase decisions due to their community membership. Instead, we find that consumers use virtual communities to broaden, update, and refine their expertise resulting in increased knowledge and altered choices.

The valence of SmulWeb as a reference group varies with the decision process at stake. This notion is not new, because we know that reference group influence in the offline context increases when a purchase decision is associated with a high desire for social acceptance, when there is little experience with the situation or the decision, in case of public conspicuousness of the purchase and/or usage, and for complex or luxurious products and services (Blackwell et al. 2001). However, virtual community influence seems to work in the opposite direction. For the three decision processes considered, i.e., decisions regarding cooking, restaurant visiting, and kitchen utensils buying, influence is strongest for the cooking decision process that is characterized as least complex and risky and that falls into the category of habitual decision-making. In contrast, influence is weakest for the kitchen utensils purchase process that is characterized as most complex and risky and that requires extended problem solving. Thus, SmulWeb is highly valued and taken into account as a

source of recipe information. In case of more complex and occasional purchase decisions, the community might be consulted, but eventually more weight is given to information and advice that comes from traditional reference groups, such as family, friends, and the media.

The valence of SmulWeb as a reference group also varies among community members. Community influence increases when members are socially involved and visit the community regularly. Traditional reference group influence functions in a similar vein: social tie to the reference group as well as the frequency with which people find themselves in the sphere of influence of the group determine its level of impact. Current insights, furthermore, suggests that active, lingering posters are more affected by the community than passive, swift lurkers (e.g., Hagel & Armstrong 1997; Hagel 1999; Brown et al. 2002). Indeed, we find that the member types that spend a lot of time in the community and that make contributions (core members, conversationalists, informationalists, and hobbyists) are to a higher extent influenced in their decision-making than the member types that only occasionally retrieve information (functionalists and opportunists). However, our examination of factors associated with community influence has made clear that duration of community visits, as well as supplying and discussing information are not significantly related to community influence on the consumer decision process. Thus, the suggested relationships between stickiness and contributing behavior on the one hand and community influence on the other are inaccurate.

Instead, for the three decision processes considered, we consistently find that community influence is highest for those members that (1) retrieve a lot of information, and (2) are susceptible to normative interpersonal influence. This first finding is not surprising, but the second is. We have examined the relationships between community influence and two types of susceptibility to interpersonal influence, namely normative interpersonal influence and informational interpersonal influence. Given the fact that one's offline behavior is not visible for the other community members and that, as a consequence, there is no pressure to conform one's actual behavior outside the community to reported group norms, we anticipated that the effect of susceptibility to normative interpersonal influence would be weaker than the effect of informational interpersonal influence. Surprisingly, we find the opposite result. The relationship between susceptibility to normative influence and community influence is significant and persistent for all phases of the three decision processes considered. Members who, in general, conform to the expectations of others and who desire to identify themselves with people around them, experience more community influence than members who are not susceptible to the opinions and behaviors of others. This raises the question whether virtual communities at large attract a proportional high percentage of members who are more

susceptible to normative interpersonal influence than other consumers. If we consider this contention to be true, it could mean two things.

The first explanation could be that online consumer-to-consumer platforms are used as just another information source to make sure that one's behavior complies with general standards of what is 'in' and what is 'out'. However, it could also mean that consumers who are susceptible to the influence of their environment find an alternative voice in the community that is more in line with their own norms, and use it to back-up their beliefs and behavior toward their traditional reference group(s). Evidence of this last assertion is found in the analysis of forum discussions in the case of a member that seeks support for her habit to drink a glass of alcohol while she prepares dinner. Her friends disapprove of this habit, but the other discussants eagerly agree and admit to do the same. The fact that susceptibility to normative interpersonal influence is positively correlated with the extent to which respondents supply and discuss information, as well as with their social involvement in the community, points to a situation in which consumers who seek approval of their consumption decisions actively create online reference groups with likeminded individuals whose opinions and behaviors are given greater weight than the opinions and behaviors of their face-to-face counterparts.

So, what kinds of people join the virtual community? How can we define its character compared with traditional reference groups? SmulWeb consists of a large and varied member database. Participants differ with respect to gender, age, race, nationality, education, income, profession, family situation, and lifestyle. No real life counterpart of SmulWeb (e.g., cooking clubs, culinary societies, and wine courses) shows this level of diversity. Offline reference groups are first of all more restricted to geographical location, but they also tend to be more limited in terms of age cohorts, as well as economical, social, racial, and ideological characteristics, according to the principle birds of a feather flock together. Online these 'feathers' are not directly apparent, and they are also less relevant, because members have one important thing in common, i.e., their interest in the community's topic of interest. SmulWeb's members share an interest in culinary matters, but their related opinions and behaviors diverge. Within the community, while interacting with other members, they have to deal with these differences.

The analysis of forum discussions has made clear that the core member group actively engages in negotiating norms, discussing values, creating meaning, and reaching a shared standard with respect to the community's focal consumption activities. Nevertheless, disagreement and diversity continues to exist; between the core group and other members, as well as within the core group itself. **It is this heterogeneity that sets the virtual community apart from traditional reference groups**, which tend to be more homogeneous

in character. Maybe this exposure to differing opinions and behaviors is not always very pleasant, as exemplified by the harsh fights that sometimes erupt between forum discussants, but it is certainly very beneficial for generating well-informed consumers who know what is out there and, hence, can make conscious choices. The online community breaks down practical, economical, social, racial, and ideological barriers, and brings together people from different backgrounds that exchange their knowledge and experiences with regard to a shared interest. In the process, they learn from and are influenced by each other.

What can we say about this process of interpersonal influence between virtual community members? **The core members can be characterized as the community's influentials**. They are true opinion leaders that are very involved in a consumption activity or product category and keen on collecting and spreading related information (cf., Rogers 1983; Venkatraman 1990; Yale & Gilly 1995). The core members are the community's ultimate contributors that nurture the community with their expertise by supplying and discussing information. They are also, together with the informationalists, the group of community members that retrieve most information from the community. Culinary opinion leadership is negatively related to community influence on cooking decisions. However, we do find a positive relationship between opinion leadership and community influence on search for restaurant and kitchen utensils information. Thus, culinary opinion leaders find the community not very valuable as a source of recipe information, but they do use it to expand their knowledge on related, and to some extent more advanced, culinary issues. If we consider the findings from the netnographic analysis, insight is gained in the underlying reason. Core members are of the opinion that the community contains too many recipes and too many bad-quality recipes to be valuable as a source of information. Instead, they rather use their own recipe collection or look for recipes in other sources, such as specialized cookbooks. If they search for recipes in the community, they limit their search to specific contributors (presumably other core members) whom they know to have expertise on a particular culinary topic.

The functionalists and opportunists are completely opposite to the core members. They hardly make any contributions to the community, thus they do not exert influence. Instead, **functionalists and opportunists consume what the other members have supplied**. Functionalists are broad information seekers that intend to increase their culinary knowledge. Thus, they retrieve information in the form of recipes, reviews, and articles. Opportunists, on the other hand, do not characterize themselves as culinary opinion seekers. They only retrieve recipes every once in a while. The conversationalists and informationalists are close to the core; they are active information retrievers and suppliers, but their culinary knowledge falls behind the core members' expertise. The level of community influence is similar for

these two member types, but it manifests itself in a different form, i.e., **the informationalists prefer to exchange factual information in the form of recipes, reviews, and articles, whereas the conversationalists prefer to engage in forum discussions and exchange information through interaction**. The hobbyists make frequent and lengthy visits to the community, but they are more involved in maintaining their personal web page and writing guest book messages, than in culinary information exchange. Community influence is considerable though, thus, **the hobbyists probably pick up information while surfing the community recreationally**.

Finally, what have we learned about the nature of interpersonal influence within virtual communities? To answer this question we have focused on the rich material of ongoing forum discussions that allows us to dissect actual interpersonal influence as it occurs. Because the forum discussions are to a large extent determined by the input of the core members, findings pertain mainly to this member group. However, due to their influential position in the community, the effects of their forum interactions are likely to resonate in their other contributions, thus affecting the community at large.

As said, the online environment breaks down barriers, which makes it easier for people from diverging backgrounds to meet, interact, and **share knowledge**, e.g., between members from different cultures or age cohorts. To convince others of their expertise, discussants often call upon authority; 'natural' authorities have most influencing power. Discussants do not only share experiences and exchange information. By comparing attitudes and behavior, they are actively engaged in **negotiating norms**. These negotiations are sophisticated and elaborate, with detailed descriptions about members' behavior and underlying motivations. A tactic that is often used to express an indirect normative judgment is telling a story about other people's deviating behavior from the proclaimed SmulWeb standards. The normative discussions focus on cooking and eating in the personal atmosphere, food and the society at large, and the functioning of the community. In all these cases, the discussants oppose themselves, more or less directly, to the public in general and/or other SmulWeb members in particular. Although they do not always reach a shared standard within their ranks, at least they perceive themselves as a group to be different from a larger outgroup. However, in some cases, the debate polarizes within the group, because of differing levels of culinary interest and different lifestyles. Discussants **oppose values** and denounce the other side. Consequently, these discussions are filled with justifications and contextualizations to inform the others of why and when one behaves in a certain (denounced) way. To balance these fights and restore unity, discussants also engage in communicative acts that **celebrate similarities**, for example, with respect to first cooking experiences, meal preparation, and dinner table habits. The virtuality of the community stretches the unifying character of these

discussions, because members more easily let go of their decorum, and show their true selves by confessing secret passions and bad habits.

In conclusion, the three studies of our exploratory research have advanced our knowledge about participation in and the effects of virtual communities on consumer decision-making. By means of the analysis of SmulWeb, we have demonstrated that virtual communities serve as reference groups that differ from traditional reference groups in their heterogeneous character. Consequently, members are faced with diverse opinions and behaviors. The core member group actively engages in negotiating and discussing norms and values about the community's topics of interest. Their discussions reveal the valence of the community as a reference group, and can be used as a starting point for an in-depth understanding in what respect the members are influenced by the community. On a more abstract level, we have systematically demonstrated that the extent of community influence differs across decisions processes and across community members. Our member typology facilitates our understanding of the different ways in which members make use of and value the community as a reference group.

8.3 IMPLICATIONS

8.3.1 Implications For Marketers

Exploiting virtual communities as sites of interpersonal influence between consumers

This dissertation has once more stressed the importance that consumers attach to the knowledge and experience of other consumers. SmulWeb's recipe database, which is entirely generated by consumers, is considered a better source of information for cooking decisions than family and friends, magazines, papers, and the broadcast media. For information about restaurants and kitchen utensils, respondents turn in the first place to their family and friends. Also the netnographic analysis has demonstrated that authoritative voices, such as the government and scientists, are given less weight than the grounded knowledge and hands-on experience of other consumers. This knowledge could be useful when marketers have to decide on who is going to be the spokesperson or main character in a marketing campaign. More importantly in the context of this dissertation, however, it points to the opportunity posed by virtual communities to actually track and monitor interpersonal influence between consumers; and by doing so, to better understand them. The highly relevant traditional reference groups formed by family, friends, acquaintances, colleagues, et cetera, function out of sight of marketers. Virtual communities, in contrast, are reference groups formed by peers that can be easily accessed by marketers who may listen in on their conversations.

Thus, virtual communities offer marketers the possibility to gain insight in word-of-mouth recommendations in an unobtrusive way and on a continuous basis. Instead of only observing, marketers could also decide to participate in the community. By providing background information, explanations, and showing interest, they may be able to influence and direct the word-of-mouth communication about their products, services, and companies. Marketers could follow an even more proactive strategy and develop virtual communities as alternatives to existing reference groups. Our research has shown that susceptibility to normative interpersonal influence is one of the main determinants of virtual community influence. Presumably, a lot of members frequent the community to look for a (shared) standard on the community's focal consumption acitivities, or to compare related norms with those put forward by other groups and sources. Marketers could facilitate these consumers by providing them with an interaction platform. In turn, marketers can cultivate this platform to their own benefit. Of course, marketers should take an ethical stance when intervening in and developing virtual communities. Announcing their presence in the community and informing community members about how their contributions might be used is critical in developing an open and honest relationship.

Locating and addressing various member types

Virtual communities can be used in a myriad of ways by a myriad number of consumers. Tracking how these consumers make use of the community and understanding what are the drivers and effects of their participation is key to the cultivation of the community as a marketing tool. Merely knowing who contributes, and who does not, is not enough to locate interesting target member segments. Our member typology, based on five behavioral dimensions that capture member participation behavior, has demonstrated that we can systematically and meaningfully distinguish between more member types than the two suggested by the lurker-poster dichotomy. It allows marketers to distinguish the community's true influentials from other contributors to the community's content, and it sets the lurkers that are really interested in increasing their knowledge about the community's topic of interest apart from those lurkers that pass by without a real motivation to do so.

Insight in these differences is helpful in making strategic decisions about whom to target and how to do that. Core members are likely to be interested in information about a fancy, new type of kitchen utensil equipment, but not in a promotion for starter kits for meals. Furthermore, we have suggested that marketers try to reach the core member directly, because if information reaches them through other community members, they might consider it unworthy for their expertise and experience. When the core member group is enthusiastic about a product, restaurant, or kitchen utensil equipment, they are likely to spread the word, thus marketing efforts directed as this small group can have a much larger impact.

The conversationalists, informationalists, and the hobbyists are culinary enthusiasts, but they have not yet reached the level of expertise as the core members. Thus, they are likely to be susceptible to information about and promotions for less-advanced culinary products and experiences. We have suggested that conversationalists who engage extensively in forum discussions could be reached by a buzz or a viral marketing campaign that appeals to their need for interaction with other community members. Informationalists, on the other hand, concentrate on factual information retrieval and supply. Thus, they could be fed with background information about product, consumption activity, or company. The attention of the hobbyists, who participate in the community for recreational entertainment related to the exploration of technical functionalities, may be attracted by an online contest or poll. This last group is less involved in supplying the community with recipes, reviews, and articles, as well as participating in the discussion forums, thus the potential influencing power of this group within the community is smaller than that of the conversationalists and informationalists.

The functionalists and opportunists have no influencing power in the community, because they hardly make any contributions. However, their impact outside the community could be considerable, considering the fact that they perceive themselves to have quite some culinary knowledge compared with their family, friends, and acquaintances, for whom they thus may serve as culinary informants. Functionalists are a more interesting target group for marketers than the opportunists, since they are truly interested in expanding their culinary knowledge. Because of their focus on factual information retrieval, their attention could be attracted by background information. Their short, half-hour-visits to the community call for information that is offered in a compact, concise manner.

Rather than suggesting that marketers take our typology normatively, we advice them to be aware of members' differential usage of the community, preferably by regularly examining log file data of actual participation behavior, and to use this information to their advantage.

8.3.2 Implications For Virtual Community Managers

Catering to different member types

Attracking a lot of different participants in virtual communities is beneficial for the learning effect between members and the overall representativeness of the community, but it makes the job of managing the community harder. Different members have different needs and wants. By catering to some, others may be let down. In the case of SmulWeb, these opposing interests are apparent, for example, with respect to the competitive element of member contributions. The quality and originality of SmulWeb's knowledge reservoir has suffered from turning contributing content into a game about quantity; many contributions are exactly

similar and copied without trial or personal touch. Many members engage in this game, much to the sorrow of the core members. They have reduced their level of information retrieval, because they cannot see "the wood for the trees" and are of the opinion that "SmulWeb offers no quality, but quantity". Likewise, the core member group regrets that the topic of culinary matters has to share stage with content of a more "trivial" nature, like diaries, personal stories, poems, cartoonesk illustrations, et cetera.

This situation of conflicting interests poses a real threat for the development of the community. Because the administrators have not set any rules with respect to recipe contributions to limit copying practices, several members have taken it upon them to enforce self-invented rules. Because some of the strategies used to enforce these rules are pretty brutal, they cause a lot of unrest and hostility in the community, which scares members away. Furthermore, the forum discussions reveal that core members think about leaving the community "if the ratio cooking versus other topics worsens", while they have already stopped retrieving recipes from SmulWeb's database. If this core group indeed leaves, then the community looses a lot of its experts and, with that, its quality as a source of culinary information will worsen.

Awareness and active management of the different needs and wants of members can solve a lot of tensions. Most importantly, managers should create separate spaces for differing activities and contributions. The tensions within SmulWeb's discussion forums between participants that want to talk about culinary issues and those that are only in for small talk has improved consirably after the introduction of a special off topic forum. In a similar vein, one of the discussants suggests that "it would be so nice if we could distinguish between culinary articles and the rest"; a functionality that is not yet offered. Finally, community management could take a more active stance in defining and enforcing rules. With so many different members participating in one space, there is need for an arbiter that oversees the general good of the community, instead of letting either the masses or the loudest screamers take over control.

Increasing community influence

Managers of virtual communities are faced with the challenge of exploiting the community in such a way that revenues are generated. In this respect, it is key to involve third parties that are willing to pay for banners, advertorials, commercial presence, direct marketing to specific member segments, and market research within the community. Convincing prospective clients of the effectiveness of their efforts can be enhanced when the community is organized in such a way that conditions under which influence on consumer decision-making is likely to occur are optimized. This dissertation has shown that community influence on consumer decision-making is determined by several factors that community

managers can exert influence upon, i.e., social involvement, frequency of visits, and the extent of information retrieval.

Social involvement can be enhanced when the community contains functionalities with which members can get to know each other; personal home pages, guest books for messages, putting members in the spotlight, birthday notifications, and chat rooms are some of the tactics that can be used to facilitate the process of developing relationships. Next, frequency of member visits can be enhanced with a constant supply of fresh information that rewards regular visits to the community to check out what's new. Thus, members should be encouraged to contribute content. This can be done by setting an example. In SmulWeb, the administrators highlight every week interesting member contributions, and they nominate personal home pages within the community as 'highly recommended' in order to stimulate other members to put an effort in supplying their own pages with similar kind of information and be rewarded for it. Finally, the extent of information retrieval can be enhanced by guaranteeing an efficient and effective search function.

8.3.3 Implications For Market Research

Analyzing forum discussions in virtual communities of consumption

Virtual communities of consumption are increasingly recognized as adequate alternatives to focus groups, personal interviews, and market-oriented ethnographies to study the drivers of consumer behavior. The method of netnography allows for an unobtrusive investigation of online consumer conversations about the norms, values, and meanings attached to consumption experiences. Our netnographic analysis indeed highlights what deeper insights about consumer behavior can be learned when online discussion forums are systematically monitored according to a careful protocol. Two observations are of relevance for market researchers that consider using virtual communities as research sites.

First of all, the classification of participation patterns has made clear that only a small percentage of community members contribute to forum discussions (16% of respondents in our sample). Thus, the discussions are not necessarily representative for the knowledge, attitudes, and behavior of community members at large. Furthermore, the discussions are to a large extent determined by the input of the core member group. The analysis of their discourse has underscored that this group considers itself in many respects different from other SmulWeb members, as well as the general public. Because the core member group consists of opinion leaders that are extensively immersed in the community and, therefore, plays an important role in defining its valence as a reference group, market research may be specifically aimed at understanding their discourse. After all, this group of culinary experts may serve as trendsetters that are followed by the other community members, and perhaps

also by consumers at large. However, when the goal of analyzing forum discussions is to get an encompassing idea of consumer sentiments, norms, values, and meanings with regard to the community's focal consumption activities at present, the findings may turn out to be rather inaccurate.

In the second place, the material that is posted is overwhelmingly rich and diverse. Although not exhaustive, the four frames of discussion that are revealed by our netnography cover the most important and interesting interaction dynamics between the discussants that bear relevance for market research. This categorization may, therefore, serve as a starting point for determining the focus of a monitoring strategy. Depending on the objective of the research question or marketing issue, one may focus, for example, on norms and values, or on practices of communal sharing and celebrating.

Insights in consumer behavior

Our analysis of forum discussions has generated many insights in consumer behavior that are relevant for various interest groups. To fully appreciate these insights we refer to the result section in Chapter 7. Overall, we may conclude that the discussants' discourse is replete with oppositions. Although more informative in their context, these oppositions still bear meaning when singled-out, because they are indicative of the underlying values, meanings, symbols, and stereotypes that the discussants associate with cooking and eating. The oppositions reveal the discussants' way of thought and, in some cases, the trade-offs that they make with respect to decisions about cooking and eating. Hence, it offers leads on how to position products, formulate marketing messages, and develop informational campaigns (taken into account the limitations about generalizability addressed above). The following oppositions are most salient;

(1) Simple dishes versus dressed-up dishes; the discussants value simplicity over dressing-up, because it shows true connoisseurship in terms of dinner preparation and food appreciation. Nevertheless, simple meals should not be mistaken for easy meals. Three course dinners and dressed-up tables are preferred over a quick bite at the kitchen table.

(2) Pure taste versus spoiled taste due to modification/industrialization; the discussants value the first over the last. When the industrialized variant is preferred over the real thing (e.g., applesauce, pea soup), this is caused by habituation that usually roots in members' childhood.

(3) Fresh products versus ready-made products; the discussants fight over which is the better option and under what conditions. Different value systems can be associated with this opposition. At its core, it is an issue of time, skill, and cooking interest.

(4) Enjoying 'bad' foods versus taking care of one's health with a nutritious diet; an obvious dilemma, especially for gourmands. The discourse is filled with words that frame the

dilemma as a battle (e.g., gluttonous attack, forcing oneself to eat fruit). Discussants engage in self-disclosures that reveal the extra enjoyment of eating bad foods during the night and when it was hidden.

(5) Mother as good caretaker versus mother as the bad caretaker; motherhood is associated with nurturing, thus, with being a fine cook. Some discussants have culinary skilled mothers, some don't. In both cases, it is a very salient point of recognition. The juxtaposition applies not so much to the discussants themselves (who tend to be good cooks), but it is used to dintinguish their ingroup from an outgroup.

(6) Father figure as the ideal culinary tutor versus mother-in-law as the anti-culinary-example; besides the mother, other family members are often mentioned in the discussions, (grand)fathers in a appreciative way, mothers-in-law not.

8.4 LIMITATIONS AND FURTHER RESEARCH

8.4.1 Limitations

Like any research project, this dissertation is limited by several constraints that could serve as starting points for further research. All three studies focus on one particular virtual community of consumption. Whereas the three studies together form a comprehensive and in-depth inquiry into consumer participation and its effect on the consumer decision process with regard to one community, it lacks a comparison with data retrieved from other communities, thus hampering generalization. In Chapter 2, we have argued that many different virtual communities types can be discerned on the basis of their purpose and topic of interest, the computer-mediated context in which they occur, and the various ways in which they can be organized.

SmulWeb focuses on a topic that is relevant for everyone: food and eating are basic necessities in our life. Thus, the community attracts members from all sorts of backgrounds. Their contributions spur variety, differentation, and discussion. However, communities that focus on topics that only a small defined population takes an interest in (e.g., opera), could turn out to be more homogeneous in character and less diverse in content. It is interesting to examine if the determinants and effects of community influence on consumer decision-making in such virtual communities are similar to the determinants and effects found with regard to the culinary virtual community. Likewise, it would be interesting to investigate participation and interpersonal influence in communities that address a different category of products and consumption activities. Our studies hint at a differential usage and valuation of the community as a source of information for more complex and risky products that require extended problem solving. However, before conclusions can be drawn, further research that

investigates this difference is needed. Finally, because of SmulWeb's topic of interest, the community attracts especially a lot of female members. An obvious avenue for future research is to investigate if results hold for communities that are biased towards men, or that are at least more gender-balanced.

SmulWeb is operated as an integrated Internet platform offering a wide range of functionalities. Furthermore, the administrators hardly interfere in members' usage of these functionalities; contributions are not censored or edited. Many virtual communities will be organized differently. The combination of databases and discussion forums offers SmulWeb members the choice to retrieve information in a factual manner, in an interactional manner, or both. Thus, we find member types that have a different preference. Communities that only offer one of these functionalities may attract a less varied group of members. Also, factors that we found to be related with community influence could turn out to be more or less relevant in communities that are solely based on, for example email lists or chat rooms. Active administrator interference in member contributions could affect the valence of the community as a reference group for its members. In case of SmulWeb, censorship on quality and originality would increase the community' value for the core members, but it is likely to decrease its value for the members that look for basic recipes. Further research is needed to investigate how community participation and influence differs with the community's computer-mediated context and organizational structure.

A second constraint of this dissertation is the one-shot character of our survey-based studies. A longitudinal investigation is necessary in order to arrive at a better understanding of community membership development overtime in terms of participation behavior and influence on the consumer decision process. Various researchers have depicted community membership as being cyclical (e.g., Kozinets 1999; Kim 2000; Alon et al. 2005). The imagined circle drawing the constellation of community member types introduced in Chapter 6 also suggests that community members move towards and away form the community center. Is this really the case or is it merely conventional wisdom? Under which conditions and with what effects does this presumed move towards and retreat from the core of community occur? How can it be influenced and would that be relevant for marketers? These questions are interesting starting points for future research.

Another interesting avenue for further research is to compare our findings based on *perceived* community influence with objective data about community influence on the consumer decision process. Although Study 1 has generated interesting insights in the factors that are related to community influence on consumer decision-making, establishing a causal link between online and offline behavior might be best examined in an experimental setting

under conditions that can be strictly controlled. With respect to the member typology it would also be more accurate and precise to use log file data of actual participation behavior. These data could be collected for the community at large, thereby circumventing the overrepresentation of core members in our sample. The advantage of our method, however, is that it enabled us to profile the member types on additional variables that cannot be observed, and to relate them to perceived levels of community influence. Exploiting this possibility resulted in interesting findings with regard to member profiles and the paths of interpersonal influence between the member types. Nevertheless, it would be interesting to gather information about community influence and participation patterns using more objective data and examine how this relates to the survey-based findings.

8.4.2 An Agenda for Future Research

Although the limitation section opens up numerous routes for further exploration, we'd like to propose two avenues of future research in more detail. The first focuses on the ways in which community members exert influence outside the community. How is information retrieved from the community disseminated beyond its boundaries? Especially interesting in this respect is the role of opinion leaders. The netnographic analysis reveals that several culinary experts that are active in the discussion forums are somewhat hesitant about advising people outside of the community with respect to cooking, food products, and restaurant visiting. This contradicts existing research about opinion leadership that states that involvement and interest in a product category is positively related to the tendency to engage in conversations with others about this product category (e.g., Venkatraman 1990). Among the reasons for this hesitation, the discussants put forward that their advice (or criticism) is often not well received. Should we attribute this to the expert level of the recommendations, or to the way the advice and criticism is vented? In other words, are the recommendations by the culinary experts not well received because they are too far off the culinary level and interest of ordinary consumers, or do the culinary experts act too much as a know-it-all? And how is this for other community member types that have less expertise compared with other members, but that are considered culinary experts by in their real life environments? Insight in this issue could improve marketers' ability to locate and create valuable opinion leaders.

The second avenue of future research concerns the question how community members form an impression about the expertise and credibility of other members. This idea builds on the findings from our netnographic analysis regarding the tricks and strategies employed by the discussants to search for valuable recipes within the community. Because the community's knowledge reservoir of member contributions has to contend with information overload and lack of quality and originality, most forum participants have developed an information search

strategy within the community that focuses on the source. In this respect it is interesting to examine how expertise and credibility are constructed and evaluated in an online environment that lacks social cues normally present in face-to-face settings. What signals are used, and how do the receivers interpret these signals? Does this impression formation process differ from the impression formation process in real life? Also, it is worth investigating which members are more likely to assess the contributor before the contribution. Finally, situational influences, such as the decision process at stake, could affect the chosen information strategy. Gaining systematic insight in this process is necessary for improving online recommendation systems and strengthening the power of virtual communities as sites of interpersonal influence.

Samenvatting

De opkomst van het Internet en de groei in computergebruik thuis en op het werk heeft het werkterrein van de marketeer aanzienlijk veranderd. Het Internet is op grote schaal geadopteerd als informatie-, communicatie-, transactie-, en distributiekanaal. Marketeers hebben steeds vaker te maken met consumenten die contact leggen met elkaar via het Internet. Elektronische discussieforums, mededelingenborden, nieuwsgroepen, emaillijsten, en chat rooms bieden consumenten, waar dan ook ter wereld, de mogelijkheid om hun kennis, ervaringen en meningen te delen. De populariteit van deze elektronische contacten tussen consumenten blijkt uit de grote hoeveelheid virtuele communities die georganiseerd zijn rondom consumptiegerelateerde interesses. In dergelijke communities kan men terecht voor specifieke informatie over producten, diensten, en bedrijven. Ook kan men er algemene informatie vinden over de consumptieactiviteit. Deelnemers kunnen zelf informatie bijdragen en contacten opbouwen met andere, gelijkgestemde deelnemers.

Dit soort connecties tussen consumenten heeft geresulteerd in aanzienlijke netwerken van consumptiekennis en kameraadschaap. Verschillende onderzoekers hebben gesuggereerd dat virtuele communities fungeren als referentiegroepen voor hun individuele deelnemers. We weten dat traditionele referentiegroepen, zoals familie, vrienden, buren en collega's, consumentengedrag beïnvloeden. Het grote verschil tussen een virtuele en traditionele referentiegroep is het feit dat deelname in virtuele communities een vrijwillige en bewuste keuze is, terwijl deelname in traditionele referentiegroepen vaak automatisch verbonden is aan afkomst, woonlocatie, werkkring en dergelijke. Mensen zijn vrij om te kiezen bij welke virtuele community ze zich aansluiten, bijvoorbeeld omdat ze een passie delen met de andere deelnemers. Hierdoor zouden virtuele communities wel eens invloedrijker kunnen zijn dan traditionele referentiegroepen waarmee men niet noodzakelijk een sterke band heeft.

Aangezien informatie-uitwisseling tussen consumenten via het Internet jaarlijks toeneemt, zullen interpersoonlijke invloedssferen steeds meer virtueel worden. Marketeers staan voor de uitdaging adequaat op deze ontwikkeling in te spelen. Hiertoe is systematisch inzicht nodig in het functioneren van virtuele communities als referentiegroepen en de invloed die ze uitoefenen op consumentenbeslissingen. Bestaand onderzoek op dit gebied is beperkt; daarom omvat deze dissertatie drie exploratieve studies die elk een ander aspect van community deelname en invloed behandelen. De eerste studie (Hoofdstuk 5) onderzoekt de determinanten en effecten van de invloed die uitgaat van virtuele communities op het consumptiebeslissingsproces van consumenten. Hierbij hebben we gebruik gemaakt van theorieën over het consumptiebeslissingsproces, theorieën over interpersoonlijke

beïnvloeding in de traditionele context en theorieën over online communicatie en interactie. In tegenstelling tot deze theoretische 'top-down' benadering, hanteert de tweede studie (Hoofdstuk 6) een datagedreven, 'bottom-up' methode om te onderzoeken welke patronen we kunnen onderscheiden in de manier waarop leden deelnemen in de community. Vervolgens onderzoeken we hoe deze patronen samenhangen met de mate van community invloed op het beslissingsproces. De derde studie (Hoofdstuk 7), tenslotte, richt zich op de groep kernleden die een centrale rol speelt in de informatie-uitwisseling tussen de leden. Om het proces van interpersoonlijke beïnvloeding in virtuele communities inhoudelijk beter te begrijpen, onderzoeken we waarover en hoe de kernleden communiceren in de discussieforums.

We hebben data verzameld door middel van twee verschillende methoden. Studie 1 en 2 zijn gebaseerd op een online vragenlijst (1007 respondenten). Voor Studie 3 hebben we een netnografie uitgevoerd; dit is een kwalitatieve onderzoeksmethode die gebruik maakt van etnografische technieken om online culturen te onderzoeken. De analyse en interpretatie van Studie 3 zijn gebaseerd op 3163 forumbijdragen afkomstig van 82 discussianten. Alle data zijn verzameld in dezelfde virtuele community: SmulWeb (www.SmulWeb.nl). SmulWeb is een Nederlandse virtuele community georganiseerd rondom culinaire zaken. Onderwerpen die in de community aan bod komen, zijn, o.a., recepten, restaurants, keukenapparatuur, etenswaren, wijn, diëten, et cetera. De community bestaat uit een centrale startpagina, persoonlijke ledenpagina's, subcommunities, receptendatabase, drankendatabase, database met restaurantrecensies, database met artikelen, winkelevaluaties, productevaluaties, aankondigingen voor culinaire evenementen, 'prikbord' voor oproepen, zes discussieforums, en een chat room. De community is online sinds september 1998 en telt op dit moment ongeveer 160.000 leden. De organisatoren zorgen voor de infrastructuur, maar de inhoud van de community wordt volledig gegenereerd door de leden. Het totale aantal bijdragen is omvangrijk.

De belangrijkste bevindingen van deze dissertatie kunnen als volgt samengevat worden. Community invloed op het beslissingsproces van consumenten is aanzienlijk, vooral in de fases van het zoeken naar informatie en het afwegen van alternatieven. Community invloed neemt af, naarmate de complexiteit van het beslissingsproces toeneemt. Echter, voor eenvoudige beslissingsprocessen wordt er meer waarde toegekend aan de community als informatiebron dan aan andere informatiebronnen, waaronder familie, vrienden, kranten, magazines, televisie en radio. De belangrijkste determinanten van community invloed op een eenvoudig beslissingsproces zijn gelijk aan die van interpersoonlijke beïnvloeding in de traditionele context. Dat wil zeggen dat naarmate leden een sterkere sociale band hebben met de community en naarmate ze de community vaker bezoeken (ze zich vaker in haar

invloedssfeer bevinden), community invloed op het beslissingsproces toeneemt. Bij community invloed op meer complexe beslissingsprocessen spelen sociale betrokkenheid en bezoekfrequentie geen rol. In plaats daarvan is invloed vooral gerelateerd aan de totale hoeveelheid informatie die aan de community wordt onttrokken.

Leden maken op verschillende manieren gebruik van de community en worden er ook in verschillende mate door beïnvloed. We kunnen zes typen leden onderscheiden op basis van hun deelnamepatroon wat betreft bezoekfrequentie, bezoekduur, en de mate waarin ze informatie aan de community onttrekken en toevoegen, en actief discussiëren met andere leden. Deze zes typen kunnen we in een denkbeeldige cirkel plaatsen die de community representeert. De kernleden bevinden zich in het midden. Zij steken een behoorlijke portie tijd en energie in de community. Door hun grote aantal bijdragen en hun kennis over het centrale thema zijn dit de opinieleiders van de community. De volgende ring omvat de conversatieliefhebbers, de informatieliefhebbers, en de hobbyisten. Conversatieliefhebbers participeren vooral in de discussieforums en chat room, informatieliefhebbers richten zich vooral op de databases, en hobbyisten houden zich vooral bezig met hun persoonlijke ledenpagina's. De functionalisten en opportunisten bevinden zich in de periferie. Zij zijn meestal nog niet zo lang lid, voelen zich niet sociaal betrokken bij de community, en voegen geen informatie toe. Functionalisten bezoeken de community vaker en onttrekken meer gevarieerde informatie dan opportunisten. De mate van informatie-uitwisseling en community invloed is aanzienlijk in het midden van de cirkel en neemt af in de richting van de periferie. De cirkel omvat drie 'oriëntatiesferen': informatieliefhebbers, functionalisten en opportunisten zijn gericht op feiten. Conversatieliefhebbers zijn gericht op interactie. Hobbyisten zijn gericht op recreatie. Kernleden combineren de drie oriëntaties.

De discussieforums weerspiegelen de rijkheid en gevarieerdheid van de virtuele community als referentiegroep. Community leden delen een interesse in hetzelfde onderwerp, maar hun meningen en consumptiegedrag lopen uiteen. Dit wordt veroorzaakt door het feit dat er aanzienlijke verschillen zijn tussen de leden wat betreft leeftijd, nationaliteit, opleiding, inkomen, woonlocatie, gezinssituatie, beroepssituatie, en levensstijl. In de discussies tussen de kernleden geven deze verschillen aanleiding tot het delen van kennis en tot het onderhandelen over normen en waarden met betrekking tot de consumptieactiviteit. De leden hanteren hierbij allerlei tactieken om elkaar van hun expertise en standpunten te overtuigen. De discussies zijn verfijnd en uitvoerig, met gedetailleerde beschrijvingen van gedrag en de onderliggende motivaties. In sommige gevallen bereiken de discussianten een gedeelde standaard, maar in andere gevallen blijken de tegenstellingen te groot waardoor het debat polariseert. Om ervoor te zorgen dat het gemeenschapsgevoel hierdoor niet ondermijnd wordt, communiceren de discussianten daarnaast veelvuldig over dat wat hen bindt. Ze bespreken herkenbare tradities en rituelen en ze delen geheime passies.

Alle discussies leveren interessante inzichten op in consumentengedrag en de afwegingen die daarbij gemaakt worden. Deze inzichten kunnen als aanknopingspunt dienen voor vervolgonderzoek door uiteenlopende groepen zoals marketeers, reclamemakers, diëtisten, en consumptiegerelateerde regelgevende instanties.

Wat zijn de implicaties van deze bevindingen voor marketeers, managers van virtuele communities en marktonderzoek? In de eerste plaats onderstreept deze dissertatie het belang dat consumenten hechten aan informatie en advies dat afkomstig is van andere consumenten. Alhoewel het verband gesuggereerd is, zijn wij de eersten die hebben aangetoond dat virtuele communities daadwerkelijk fungeren als referentiegroep en dat ze invloed uitoefenen op consumentenbeslissingen. In tegenstelling tot traditionele referentiegroepen, kunnen marketeers het proces van interpersoonlijke beïnvloeding tussen community leden onopvallend traceren en analyseren. Zij kunnen er ook actief aan deelnemen en de virtuele community voorzien van achtergrond informatie, uitleg en commentaar om op die manier invloed uit te oefenen op de communicatie over hun producten, diensten, en bedrijven. Door zelf virtuele communities te creëren, kunnen marketeers inspelen op de behoefte van consumenten aansluiting te vinden bij gelijkgestemden met wie normen en waarden ten aanzien van een consumptieactiviteit gedeeld en besproken kunnen worden.

Om het interpersoonlijke beinvloedingsproces tussen community leden te optimaliseren, zouden managers van virtuele communities aandacht moeten besteden aan het verhogen van de sociale betrokkenheid van de leden bij de community, het verhogen van hun bezoekfrequentie en het vergroten van de hoeveelheid informatie die de leden aan de community onttrekken. Sociale betrokkenheid kan gestimuleerd worden door het toevoegen van functionaliteiten waarmee de leden elkaar kunnen leren kennen. De bezoekfrequentie kan verhoogd worden door ervoor te zorgen dat er regelmatig nieuwe en interessante bijdragen worden toegevoegd. Management kan dit stimuleren door goede bijdragen eruit te lichten en te belonen, zodat leden worden aangespoord deze voorbeelden te volgen. De aantrekkelijkheid van de community als informatiebron is voor een groot deel afhankelijk van een effectieve en efficiënte zoekfunctie.

Marketeers moeten zich realiseren dat communities op verschillende manieren gebruikt worden door hun leden. De meest gangbare classificatie van typen leden is de dichotomie ‘poster’ versus ‘lurker’; dat wil zeggen, leden die actief bijdragen aan de inhoud van de community versus leden die alleen maar lezen wat anderen bijgedragen hebben. Onze classificatie van zes typen leden geeft een gedetailleerder inzicht in hoe vaak, hoe veel, en in welke vorm leden informatie bijdragen en onttrekken aan de community. Het stelt marketeers in staat om onderscheid te maken tussen opinieleiders en andere ‘posters’, en tussen ‘lurkers’ die echt geïnteresseerd zijn het uitbreiden van hun kennis en ‘lurkers’ die

hiertoe niet gemotiveerd zijn. Dit inzicht is belangrijk voor het bepalen van de juiste doelgroep voor marktonderzoek of marketingacties. Door rekening te houden met de verschillende oriëntatiesferen van de typen leden, kunnen marketeers communicatiestrategiën bedenken die inspelen op specifieke behoeften. Voor de typen leden die gericht zijn op feiten kan men achtergrondinformatie op een themapagina plaatsen. De aandacht van de typen leden die gericht zijn op interactie kan getrokken worden door een nieuwtje bekend te maken in een discussieforum. En de typen leden die gericht zijn op recreatie kan men bereiken door een wedstrijd organiseren.

Virtuele communities bestaan uit zeer verschillende leden. Anders dan bij traditionele referentiegroepen waar geldt 'soort zoekt soort', is de virtuele community bij uitstek de plaats waar mensen samenkomen die elkaar in het echte leven niet zo gauw zouden kennen vanwege geografische, demografische, economische, en sociale barrières. Deze verschillen bevorderen het leereffect tussen de leden, maar ze zorgen ook voor onderlinge spanningen. Managers van virtuele communities staan voor de uitdaging hier adequaat mee om te gaan. Twee adviezen zijn op z'n plaats. Zorg ervoor dat de community duidelijk afgebakende onderdelen biedt voor verschillende soorten activiteiten en bijdragen, zodat bijvoorbeeld de feitenzoekers niet teveel op gezellige theekransjes stuiten en andersom. Zorg ook voor enkele basisregels wat betreft vorm en inhoud van de bijdragen. Zonder regels van bovenaf, stellen de leden eigen regels in en corrigeren ze elkaar als daarvan afgeweken wordt. Hoe meer er aan de leden wordt overgelaten, hoe meer ze zich eigenaar van de community voelen. Dit levert toegewijde, actieve leden op, die het echter niet altijd met elkaar eens zijn over waar de community voor staat en welke regels er gehanteerd zouden moeten worden. Het is de taak van het management om het algemene belang van de community te bewaken en om richting te geven aan haar ontwikkeling.

De netnografische analyse van discussieforums illustreert hoe marktonderzoekers virtuele communities kunnen gebruiken als alternatief voor focusgroepen, interviews en etnografische veldstudies om te onderzoeken welke motivaties, afwegingen, normen en waarden ten grondslag liggen aan consumentengedrag. Online discussieforums bevatten een enorme hoeveelheid rijke informatie. Onze analyse heeft vier interactiedynamieken in kaart gebracht die het meest relevant zijn voor marktonderzoek; leden nemen deel in discussies om (1) kennis te delen, (2) te onderhandelen over normen, (3) uitdrukking te geven aan tegenovergestelde waarden, en (4) overeenkomsten te vieren. Deze door ons beschreven discussieframes kunnen als uitgangspunt dienen om een monitoringsstrategie vast te stellen die zich, afhankelijk van het doel van het onderzoek, richt op normen en waarden of gedeelde rituelen en symbolen.

Tenslotte heeft deze dissertatie vastgesteld dat slechts een klein percentage van de leden actief participeert in discussieforums. Het zijn vooral de kernleden die van zich laten horen.

Alhoewel deze leden opinieleiders zijn die een aanzienlijke stempel drukken op het karakter van de community als referentiegroep, moeten marktonderzoekers die online discussieforums analyseren rekening houden met de beperkingen die dit met zich meebrengt wat betreft het generaliseren van resultaten naar een bredere populatie.

References

Alba, J.W., Chattopadhyay, A. (1985). "Effects of Context and Part-Category Cues on Recall of Competing Brands." *Journal of Marketing Research* **22** (August): 340-349.

Alba, J.W., Hutchinson, J.W. (1987). "Dimensions of Consumer Expertise." *Journal of Consumer Research* **13** (March): 411-454.

Alba, J.W., Lynch, J., Weitz, B., Janiszewski, C., Lutz, R., Sawyer, A., Wood, S. (1997). "Interactive Home Shopping: Consumer, Retailer, and Manufacturer Incentives to Participate in Electronic Marketplaces." *Journal of Marketing* **61** (3): 38-53.

Alon, A., Brunel, F., Schneier Siegal, W. (2005). "Ritual Behavior and Community Life-Cycle: Exploring the Social Psychological Roles of Net Rituals in the Development of Online Consumption Communities." In: *Online Consumer Psychology: Understanding How to Interact with Consumers in the Virtual World*. Haugvedt, C., Machleit, K., Yalch, R. (Eds.), Hillsdale, NJ, Erlbaum.

Anderson, J.C., D.W. Gerbing, & J.E. Hunter (1987). "On the Assessment of Unidimensional Measurement: Internal and External Consistency, and Overall Consistency Criteria." *Journal of Marketing Research* **24** (November): 432-437.

Armstrong, J.S., Overton, T.S. (1977). "Estimating Non-response Bias in Mail Surveys." *Journal of Marketing Research* **14** (August): 396-402.

Arndt, J.A. (1967), "Role of Product-Related Conversations in the Diffusion of a New Product." *Journal of Marketing Research* **4** (August): 291-95.

Bachman, D., Elfrink, J, Vazanna, G. (1996). "Tracking the Progress of Email Versus Snail-Mail." *Marketing Research* **8**: 31-35.

Bagozzi, R.P., Dholakia, U.M. (2002). "Intentional Social Action in Virtual Communities." *Journal of Interactive Marketing* **16** (2): 2-21.

Balasubramanian, S., Mahajan, V. (2001). "The Economic Leverage of the Virtual Community." *International Journal of Electronic Commerce* **5** (Spring): 103-138.

Baym, N.K. (1995). "The Emergence of Community in Computer-Mediated Communication," In: *Cybersociety: Computer-Mediated Communication and Community*, Jones, S.G. (Ed.), Thousand Oaks/London/New Delhi, SAGE Publications: 138-163.

Baym, N.K. (1998). "The Emergence of On-Line Community," In: *CyberSociety 2.0: Revisiting Computer-Mediated Communition and Community*, Jones, S.G. (Ed.), Thousand Oaks/London/New Delhi, SAGE Publications: 35-68.

Bearden, W.O., Etzel, M.J. (1982). "Reference Group Influence on Product and Brand Purchase Decisions." *Journal of Consumer Research* **9** (September): 183-194.

Bearden, W.O., Netemeyer, R.G., Teel, J.E. (1989). "Measurement of Consumer Susceptibility to Interpersonal Influence." *Journal of Consumer Research* **15** (March): 473-481.

Beaubien, M.P. (1996). "Playing at Community: Multi-User Dungeons and Social Interaction in Cyberspace." In: *Communication and Cyberspace: Social Interaction in an Electronic Environment*. Strate, L., Jacobsen, R., Gibson, S.B. (Eds.), Cresskill, NJ, Hampton Press: 179-189.

Beckmann, S.C. (2001). "Viral Marketing=Word-of-Mouth Marketing on the Internet?" Conference Proceedings, *European Marketing Academy Conference*, Bergen, Norwegian School of Economics and Business Administration.

Bickart, B., Schindler, R.M. (2001). "Internet Forums as Influential Sources of Consumer Information." *Journal of Interactive Marketing* **15** (3): 31-40.

Blackwell, R.D., Miniard, P.W., Engel, J.F. (2001). *Consumer Behavior*. Orlando, FL., Harcourt College Publishers.

Bloch, P.H., Sherrell, D.L., Ridgway, N.M. (1986). "Consumer Search: An Extended Framework." *Journal of Consumer Research* **13** (June): 119-126.

Bollen, K., Lennox, R. (1991). "Conventional Wisdom on Measurement: A Structural Equation Perspective". *Psychological Bulletin* **110** (2): 305-314.

Bolter, J. D. (1996). "Virtual Reality and the Redefinition of Self." In: *Communication in Cyberspace: Social Interaction in an Electronic Environment*. Strate, L., Jacobson, R., Gibson, S.B. (Eds.), Cresskill, NJ, Hampton Press: 105-121.

Bourdieu, P. ([1979] 1996), *Distinction: A Social Critique of the Judgment of Taste*. Nice, R. (Trans.), Cambridge, MA, Harvard University Press.

Boush, D.M., Kahle, L. (2001). "Evaluating Online Consumer Discussions: From Qualitative Analysis to Signal Detection." Conference Proceedings *La Londe Seminar: Marketing Communications and Consumer Behavior*. Aix-en-Provence, Institut d'Administration des Entreprises d'Aix-en-Provence.

Bristor, J.M. (1990). "Enhanced Explanations of Word of Mouth Communications: the Power of Relationships." *Research in Consumer Behavior* **4**: 51-83.

Brodin, O. (2000). "Les Communautés Virtuelles : Un Potentiel Marketing Encore Peu Exploré." *Décisions Marketing* **21** (Septembre-Décembre): 47-56.

Brooker, G. (1984). "An Assessment of an Expanded Measure of Perceived Risk." In: *Advances in Consumer Research* **11**, Kinnear, Th.C. (Ed.), Provo, UT, Association for Consumer Research: 439-441.

Broussard, G. (2000). "How Advertising Frequency Can Work to Build Online Advertising Effectiveness." *International Journal of Market Research* **42** (4): 439-457.

Brown, J. (1999). "There Goes The Neighborhood." *Salon.com* (January 19). Available at: http://www.salon.com/21st/feature/1999/01/cov_19feature.html

Brown, J.J., Wildt, A.R. (1992). "Consideration Set Measurement." *Journal of the Academy of Marketing Science* **20** (Summer): 235-243.

Brown, S.L., Tilton, A., Woodside, D.M. (2002). "The Case for Online Communities." *McKinsey Quarterly* (1).

Bruckman, A. (1996). "Finding One's Own Space in Cyberspace." *Technology Review* (January): 48-54.

Bughin, J., Hagel, J. (2000). "The Operational Performance of Virtual Communities." *Electronic Markets* **10** (4): 237-243.

Bughin, J., Hasker, S., Hilton-Segel, L, Zeisser, M. (2001). "From Birth to Adolescence: Lessons Learned from Online Media." *Digital Economy Lab, McKinsey & Company* (September).

Bughin, J., Zeisser, M. (2001). "The Marketing Scale Effectiveness of Virtual Communities." *Digital Economy Lab, McKinsey & Company* (July).

Burke Jarvis, C., Mackenzie, S.B., Podsakoff, Ph.M. (2003). "A Critical Review of Construct Indicators and Measurement Model Misspecification in Marketing and Consumer Research". *Journal of Consumer Research* **30** (September): 199-218.

Burnett, G., Buerkle, H. (2004). "Information Exchange in Virtual Communities: A Comparative Study." *Journal of Computer-Mediated Communication* **9** (2). Available online: http://www.ascusc.org/jcmc

Burnkrant, R.E., Cousineau, A. (1975). "Informational and Normative Social Influence in Buyer Behavior." *Journal of Consumer Research* **2** (December): 206-215.

Calder, B., Burnkrant, R. (1977). "Interpersonal Influence on Consumer Behavior: An Attribution Theory Approach." *Journal of Consumer Research* **4** (June): 29-38.

Cannon, J.P, Perrault jr., W.D. (1999). "Buyer-Seller Relationships in Business Markets." *Journal of Marketing Research* **36** (November): 439-60.

Catterall, M., Maclaran, P. (2002). "Researching Consumers in Virtual Worlds: A Cyberspace Odyssey." *Journal of Consumer Behaviour* **1** (3): 228-237.

CBS Statline (2000a). *Regionale Inkomensverdeling 2000; Kerncjfers*. Rijswijk, Centraal Bureau voor de Statistiek. Available online: http://statline.cbs.nl

CBS Statline (2000b). *Gemiddelde Inkomens van Huishoudens 1990-2000*. Rijswijk, Centraal Bureau voor de Statistiek. Available online: http://statline.cbs.nl

CBS Statline (2002; 2003). *ICT en Mediagebruik 1997-2003*. Rijswijk. Centraal Bureau voor de Statistiek. Available online: http://statline.cbs.nl

Celsi, R.L., Rose, R.L., Leigh, Th.W. (1993). "An Exploration of High-Risk Leisure Consumption through Skydiving." *Journal of Consumer Research* **20** (June): 1-23.

Chatterjee, P. (2001). "Online Reviews: Do Consumers Use Them?" In: *Advances in Consumer Research* **28**, Gilly, M.C., Myers-Levi, J. (Eds.), Provo, UT, Association for Consumer Research: 129-133.

Chevalier, J., Mayzlin, D. (2003). "The Effect of Word-of-Mouth on Sales: Online Book Reviews." *Working Paper Yale School of Management*, New Haven, CT.

Constant, D., Sproull, L., Kiesler, S (1996). "The Kindness of Strangers: The Usefulness of Electronic Weak Ties For Technical Advice." *Organization Science* **7** (2): 119-135.

Cova, B., Cova, V. (2001). "Tribal Aspects of Postmodern Consumption Research: The Case of French Inline Roller Skaters." *Journal of Consumer Behaviour* **1** (1): 67-76.

Cummings, W.H., Venkatesh, M. (1976). "Cognitive Dissonance and Consumer Behavior: A Review of the Evidence." *Journal of Marketing Research* **13** (August): 303-308.

Degeratu, A.M., Rangaswamy, A., Wu, J. (2001). "Consumer Choice Behavior in Online and Traditional Supermarkets: The Effects of Brand Name, Price, and Other Search Attributes." *International Journal of Research in Marketing* **17**: 55-78.

Dellaert, B. (2000). "Tourists' Valuation of Other Tourists' Contributions to Travel Websites." *Working Paper MIT E-commerce Forum*, Boston, MA: 1-10.

Dellarocas, C., Farag Award, N., Zhang, X. (2004). "Exploring the Value of Online Reviews to Organizations: Implications for Revenue Forecasting and Planning." Paper Presentation *Marketing Science Conference*, Rotterdam, Erasmus Universiteit Rotterdam.

DeSanctis, G., Gallupe, R.B. (1987). "A Foundation for the Study of Group Decision Support Systems. " *Management Science* **33**: 589-609.

Deutsch, M.G., Harold, B.G. (1955). "A Study of Normative and Informational Influence Upon Individual Judgment." *Journal of Abnormal and Social Psychology* **51** (November): 629-636.

Deutskens, E., De Ruyter, K., Wetzels, M., Oosterveld, P. (2004). "Response Rate and Response Quality of Internet-Based Surveys: An Experimental Study." *Marketing Letters* **15** (1): 21-36.

Dholakia, U.M., Bagozzi, R.P., Klein Pearo, L. (2004). "A Social Influence Model of Consumer Participation in Network- and Small-Group-Based Virtual Communities." *International Journal of Research in Marketing* **21**: 241-263.

Diamantopoulos, A., Winklhofer, H.M. (2001). "Index Construction with Formative Indicators: An Alternative to Scale Development." *Journal of Marketing Research* **38** (May): 269-277.

Dichter, E. (1966). "How Word-of-Mouth Advertising Works." *Harvard Business Review* (November-December): 147-166.

Dickerson, M.D., Gentry, J.W. (1983). "Characteristics of Adopters and Non-Adopters of Home Computers." *Journal of Consumer Research* **10** (September): 225-235.

Donath, J.S. (1999). "Identity and Deception in the Virtual Community." In: *Communities in Cyberspace*. Smith, M.A, Kollock, P. (Eds.), London, Routledge: 29-60.

DuVal Smith, A. (1999). "Problems of Conflict Management in Virtual Communities." In: *Communities in Cyberspace*. Smith, M.A, Kollock, P. (Eds.), London, Routledge: 134-167.

Dwyer, F.R., Schurr, P.H., Oh, S. (1987). "Developing Buyer-Seller Relationships." *Journal of Marketing* **51** (April): 11-27.

Ess, Ch., AoIR Ethics Working Committee (2002). *Ethical Decision-Making and Internet Research: Recommendations from the Association of Internet Research Ethics Working Committee*. Available online: www.aoir.org/reports/ethics.pdf

Fallows, D. (2004). *The Internet and Daily Life*. Washington, D.C., Pew Internet & American Life Project. Available online: http://www.pewinternet.org/reports

Feick, L.F., Price, L.L. (1987). "The Market Maven: A Diffuser of Marketplace Information." *Journal of Marketing* **51** (January): 85-97.

Festinger, L. (1962). *A Theory of Cognitive Dissonance*. Stanford, CA, Stanford University Press.

Fischer, E., Bristor, J., Gainer, B. (1996). "Creating of Escaping Community?: An Exploratory Study of Internet Consumers' Behaviors." In: *Advances in Consumer Research* **23**, Corfman, K.P., Lynch jr., J.G. (Eds.), Provo, UT, Association for Consumer Research: 178-182.

Fishbein, M., Azjen, I. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Reading, MA, Addison-Wesley.

Fitzgerald Bone, P. (1992). "Determinants of Word-of-Mouth Communications During Product Consumption." In: *Advances in Consumer Research* **19**, Sherry, J.F., Sternthal, B. (Eds.), Provo, UT, Association for Consumer Research: 579-583.

Flynn, L.R., Goldsmith, R.E., Eastman, J.K. (1994). "The King and Summers Opinion Leadership Scale: Revision and Refinement." *Journal of Business Research* **31**: 55-64.

Fornell, C., Bookstein, F.L. (1982). "Two Stuctural Equation Models: LISREL and PLS Applied to Consumer Exit-Voice Theory". *Journal of Marketing Research* **19** (November): 440-452.

Fox, N., Roberts, C. (1999). "GPs in Cyberspace: The Sociology of a Virtual Community." *The Sociological Review* **47** (4): 643-671.

Fulk, J. Schmitz, J., Steinfeld, C.W. (1990). "A Social Influence Model of Technology Use." In: *Organizations and Communication Technology*., Fulk, J., Steinfeld, C. (Eds.), Newbury Park, CA, SAGE Publications.

Fulk, J. Schmitz, J., Ryu, D. (1995). "Cognitive Elements in the Social Construction of Technology." *Management Communication Quarterly* **8** : 259-288.

Galimberti, C., Ignazi, S., Vercesi, P., Riva, G. (2001). "Communication and Cooperation in Networked Environments: An Experimental Analysis." *CyberPsychology & Behavior* **4** (1): 131-146.

Garton, L., Haythornthwaite, C., Wellman, B. (1997). "Studying Online Social Networks." *Journal of Computer-Mediated Communication* **3** (1). Available online: http://www.ascusc.org/jcmc

Gatignon, H., Robertson, Th.S. (1985). "A Propositional Inventory for New Diffusion Research." *Journal of Consumer Research* **11** (March): 849-867.

Gauntlett, D., Ed. (2000). *Web.Studies; Rewiring Media Studies for the Digital Age*. London, Arnold.

Gnanadesikan, R., Kettenring, J.R., Tsao, S.L (1995), "Weighting and Selection of Variables for Cluster Analysis." *Journal of Classification* **12**: 113-36.

Glaser, B.G., Strauss, A.L. (1967). *The Discovery of Grounded Theory*. Chicago, IL, Aldine.

Granitz, N.A., Ward, J.C. (1996), "Virtual Community: A Sociocognitive Analysis," In: *Advances in Consumer Research* **23**, Corfman, K.P., Lynch jr., J.G. (Eds.), Provo, UT, Association for Consumer Research: 161-66.

Granovetter, M. S. (1973). "The Strength of Weak Ties." *American Journal of Sociology* **87** (6): 1361-1380.

Granovetter, M. S. (1982). "The Strength of Weak Ties: A Network Theory Revisited." In: *Social Structure and Network Analysis*. Marsden, P.V., Lin, N. (Eds.), Beverly Hills, CA, SAGE Publications: 105-130.

Gutman, J. (1990). "Adding Meaning to Values by Directly Assessing Value-Benefit Relationships." *Journal of Business Research* **20**: 153-160.

Hagel III, J. (1999). "Net Gain: Expanding Markets Through Virtual Communities". *Journal of Interactive Marketing* **13** (1): 55-65.

Hagel III, J., Armstrong, A.G. (1997). *Net Gain: Expanding Markets Through Virtual Communities*. Boston, MA, Harvard Business School Press.

Hair jr., J.F., Anderson, R.E., Tatham, R.L., Black, W.C. (1998), *Multivariate Data Analysis*. Upper Saddle River, NJ, Prentice Hall.

Hair, N., Clark, M. (2003). "A Digital Exploration of Virtual Relationships: a Netnographic Research Agenda." Conference Proceedings *European Marketing Academy Conference*, Glasgow, University of Strathclyde.

Hare, P.A. (1962). *Handbook of Small Group Research*. New York, NJ, Free Press of Glencoe.

Harrington, C.L., Bielby, D.D. (1995). "Where Did You Hear That? Technology and the Social Organization of Gossip." *The Sociological Quarterly* **36** (3): 607-628.

Harrison, T., Jenkins, H. (1996). "Appendix A: Interview with Henry Jenkins." In: *Enterprise Zone*, Harrison, T. (Ed.), Boulder, CO, Westview: 259-278.

Hauben, M., Hauben, R. (1999). *On the History and Impact of Usenet and the Internet*. Los Alamitos, CA, IEEE Computer Society Press.

Hauser, J.R., Wernfelt, B. (1990). "An Evaluation Cost Model of Consideration Sets." *Journal of Consumer Research* **16** (March): 393-408.

Hawkins, D.I., Best, R.J., Coney, K.A (1983). *Consumer Behavior: Implications for Marketing Strategy*. Plano, TX, Business Publications, Inc.

Hennig-Thurau, T., Gwinner, K.P., Walsh, G., Gremler, D.D. (2004). "Electronic Word-of-Mouth Via Consumer-Opinion Platforms: What Motivates Consumers to Articulate Themselves on the Internet?" *Journal of Interactive Marketing* **18** (1): 38-52.

Hemetsberger, A., Pieters, R. (2001). "When Consumers Produce on the Internet: An Inquiry into Motivational Sources of Contribution to Joint-Innovation." Conference Proceedings *La Londe Seminar: Marketing Communications and Consumer Behavior*, Aix-en-Provence, Institut d' Administration des Entreprises d' Aix-en-Provence: 274-291.

Herr, P.M., Kardes, F.R., Kim, J. (1991). "Effects of Word-of-Mouth and Product-Attribute Information on Persuasion: An Accesibility-Diagnosticity Perspective." *Journal of Consumer Research* **17** (March): 454-462.

Hertz, S. (1996). "Drifting Closer and Drifting Away in Networks: Gradual Changes in Interdependence of Networks." In: *Networks in Marketing*. Iacobucci, D. (Ed.), Thousand Oaks/London/New Delhi, SAGE Publications: 179-204.

Hildreth, P.M. (2004). *Going Virtual: Distributed Communities of Practice*. Hershey, PA, Idea Group Publishing.

Hiltz, S.R., Johnson, K., Turoff, M. (1986). "Experiments in Group Decision Making." *Human Communication Research* **13**: 225-252.

Hoch, S.J., Ha, Y.W. (1986). "Consumer Learning: Advertising and the Ambiguity of Product Experience." *Journal of Consumer Research* **13** (September): 221-233.

Hoffman, D.L., Novak, Th.P., Chatterjee, P. (1995). "Commercial Scenarios for the Web: Opportunities and Challenges." *Journal of Computer-Mediated Communication* **1** (3). Available online: http://www.ascusc.org/jcmc

Hoffman, D.L., Novak, Th.P. (1996). "Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations." *Journal of Marketing* **60** (July): 50-68.

Holmes, J.H., Lett jr., J.D. (1977). "Product Sampling and Word of Mouth." *Journal of Advertising Research* **17** (October): 35-40.

Homans, G. (1961). *Social Behavior: Its Elementary Forms*. New York, NJ, Harcourt.

Homer, P., Kahle, L.R. (1988). "A Structural Equation Analysis of the Value-Attitude-Behavior Hierarchy." *Journal of Personality and Social Psychology* **54**: 638-646.

Horrigan, J.B. (2000). *New Internet Users: What They Do Online, What They Don't, and Implications for the Net's Future*. Washington, D.C., Pew Internet & American Life Project. Available online: http://www.pewinternet.org/reports

Horrigan, J.B. (2001). *Online Communities: Networks that Nurture Long-Distance Relationships and Local Ties*, Washington, D.C., Pew Internet & American Life Project. Available online: http://www.pewinternet.org/reports

Horrigan, J.B., Rainie, L. (2002). *Getting Serious Online*. Washington, D.C., Pew Internet & American Life Project. Available online: http://www.pewinternet.org/reports

Houtman, J. (2003). "Oprichter eBay investeert in Meetup.com." *Emerce Online* (November). Available online:
http://www.emerce.nl/archives/nieuws/Media_Marketing/15429.html

Ilieva, J., Baron, S., Healey, N.M. (2002). "Online Surveys in Marketing Research: Pros and Cons." *International Journal of Market Research* **44** (3): 361-382.

Irwin, J. (1973). "Surfing: The Natural History of an Urban Scene." *Urban Life and Culture* **2**: 131-160.

Jackson, P. Favier, J., Cremers, I., Van Kruijsdijk, J. (2003). *The Tipping Point Online; Consumer Technographics Europe*. Amsterdam, Forrester Research, Inc.

Jacoby, J., Hoyer, W.D. (1981). "What if Opinion Leaders Didn't Know More? A Question of Nomological Validity." In: *Advances in Consumer Research* **8**, Monroe, K.B. (Ed.), Ann Arbor, MI, Association for Consumer Research: 31-34.

Jensen Schau, H., Gilly, M.C. (2003). "We Are What We Post? Self-Presentation in Personal Web Space." *Journal of Consumer Research* **30** (December): 385-404.

Johnson Brown, J., Reingen, P.H. (1987). "Social Ties and Word-of-Mouth Referral Behavior." *Journal of Consumer Research* (December) **14**: 350-362.

Jolink, D. (2000). *Virtual Communities: Digitale Doelmarkten voor E-Commerce*. Groningen, Gopher Publishers.

Jones, S.G. (1998). "Information, Internet, and Community: Notes Towards an Understanding of Community in the Information Age." In: *CyberSociety 2.0: Revisiting Computer-Mediated Communication and Community*. Jones, S.G. (Ed.), Thousand Oaks/London/New Delhi, SAGE Publications: 1-35.

Jones, S.G. Ed. (1999). *Doing Internet Research: Critical Issues and Methods of Examining the Net*. Thousand Oaks/London/New Delhi, SAGE Publications.

Jones, Q. (1997). "Virtual Communities, Virtual Settlements & Cyberarcheology: a Theoretical Outline." *Journal of Computer-Mediated Communication* **3** (3). Available online: http://www.ascusc.org/jcmc

Kahle, L.R. (1986). "The Nine Nations of North America and the Values Basis of Geographic Segmention." *Journal of Marketing* **50**: 37-47.

Kassarjian, H.E. (1986). "Consumer Research: Some Recollections and a Commentary." In: *Advances in Consumer Research* **13**, Lutz, R.J. (Ed.), Provo, UT, Association for Consumer Research: 6-8.

Kiecker, P., Cowles, D. (2001). "Interpersonal Communication and Personal Influence on the Internet." Conference Proceedings *La Londe Seminar: Marketing Communications and Consumer Behavior*, Aix-en-Provence, Institut d' Administration des Entreprises d' Aix-en-Provence: 310-325.

Kiesler, S., Siegel, J., McGuire, T.W. (1984). "Social Psychological Aspects of Computer-Mediated Communication." *American Psychologist* **39** (10): 1123-1134.

Kiesler, S., Sproull, L.S. (1986). "Response Effects in the Electronic Survey." *Public Opinion Quarterly* **50** (3): 402-413.

Kim, A.J. (2000). *Community Building on the Web: Secret Strategies for Successful Online Communities*. Berkeley, CA, Peachpit Press.

King, S.A. (1996). "Researching Internet Communities: Proposed Ethical Guidelines for the Reporting of Results." *Information Society* **12** (2): 119-127.

Kollock, P., Smith, M.A. (1999). "Introduction: Communities in Cyberspace." In: *Communities in Cyberspace*. Smith, M.A., Kollock, P. (Eds.), London, Routledge: 3-29.

Kozinets, R.V. (1997). "'I Want to Believe': a Netnography of The X-Philes' Subculture of Consumption." In: *Advances in Consumer Research* **24**, Brucks, M., MacInnis, D. (Eds.), Provo, UT, Association for Consumer Research: 470-475.

Kozinets, R.V. (1998). "On Netnography: Initial Reflections on Consumer Research Investigations of Cyberculture." In: *Advances in Consumer Research* **25**, Alba, J.W., Hutchinson, J.W. (Eds.), Provo, UT, Association for Consumer Research: 366-371.

Kozinets, R.V., Handelman, J. (1998). "Ensouling Consumption: a Netnographic Exploration of the Meaning of Boycotting Behavior." In: *Advances in Consumer Research* **25**, Alba, J.W., Hutchinson, J.W. (Eds.), Provo, UT, Association for Consumer Research: 475-480.

Kozinets, R.V. (1999). "E-Tribalized Marketing?: The Strategic Implications of Virtual Communities of Consumption." *European Management Journal* **17** (3): 252-264.

Kozinets, R.V. (2001). "Utopian Enterprise: Articulating the Meanings of Star Trek's Culture of Consumption." *Journal of Consumer Research* **28** (June): 67-88.

Kozinets, R.V. (2002a). "The Field Behind The Screen: Using Netnography For Marketing Research in Online Communities." *Journal of Marketing Research* **39** (February): 61-72.

Kozinets, R.V. (2002b). "Can Consumers Escape the Market? Emancipatory Illuminations from Burning Man." *Journal of Consumer Research* **29** (June): 20-38.

Laing, A., Hogg, G., Newholm, T. (2004). "Talking Together: Consumer Communities and Health Care," In: *Advances in Consumer Research* **31**, Kahn, B.E., Luce, M.F. (Eds.), Provo, UT, Association for Consumer Research.

Langer, R. (2003). "Sharpening the Knife: Consumers' Fleshing out Plastic Surgeons in Internet Discussion Groups." Conference Proceedings *European Marketing Academy Conference*, Glasgow, University of Strathclyde.

Lea, M., O'Shea T., Fung, P., Spears, R. (1992). "Flaming in Computer-Mediated Communication: Observations, Explanations, Implications." In: *Contexts of Computer-Mediated Communication*, Lea, M. (Ed.), London, Harvester-Whatsheaf: 89-112.

Leiner, B.M., Cerf, V.G., Clark, D.D., Kahn, R.E., Kleinrock, L., Lynch, D.C., Postel, J., Roberts, L.G., Wolff, S. (2000). *A Brief History of the Internet*, Reston, VA, Internet Society. Available online: http://www.isoc.org/internet/history/brief.shtml

Lenhart, A., Horrigan, J., Fallows, D. (2004). *Content Creation Online*. Washington, D.C., Pew Internet & American Life Project. Available online: http://www.pewinternet.org/reports

Liu, G.Z. (1999). "Virtual Community Presence in Internet Relay Chatting." *Journal of Computer-Mediated Communication* **5** (1). Available online: http://www.ascusc.org/jcmc

Lumpkin, J.R. (1985). "Shopping Orientation Segmentation of the Elderly Consumer." *Journal of the Academy of Marketing Science* **13** (Spring): 271-289.

Mabry, E.A. (1997). "Framing Flames: The Structure of Argumentative Messages on the Net." *Journal of Computer-Mediated Communication* **2** (4). Available online: http://www.ascusc.org/jcmc

Maclaran, P., Hogg, M.K., Curasi, C.F. (2003). "Integrating Offline and Online Data Sets For Multi-Method Research in Marketing: Conceptualization and Illustration." Conference Proceedings *European Marketing Academy Conference*, Glasgow, University of Strathclyde.

Madden, M. (2003). *America's Online Pursuits*. Washington, D.C., Pew Internet & American Life Project. Available online: http://www.pewinternet.org/reports

Malhotra, N.K. (1996). *Marketing Research: an Applied Orientation*. Upper Saddle River, NJ, Prentice Hall.

Markus, M.L. (1994). "Finding a Happy Medium: Explaining the Negative Effects of Electronic Communication on Social Life at Work." *ACM Transactions on Information Systems* **12**: 119-149.

Martin, D., Lomax, W. (2000). "Word-of-Mouth vs. Word-of-Mouse: the Effects of the Internet on Consumer's Pre-purchase Information Search Activities?" Conference Proceedings *European Marketing Academy Conference*, Rotterdam, Erasmus Universiteit Rotterdam.

Mathwick, C. (2002). "Understanding the Online Consumer: A Typology of Online Relational Norms and Behavior." *Journal of Interactive Marketing* **16** (1): 40-55.

McAlexander, J.H., Schouten, J.W., Koenig, H.F. (2002). "Building Brand Community." *Journal of Marketing* **66** (January): 38-54.

McCormick N.B., McCormick, J.W. (1992). "Computer Friends and Foes: Content of Undergraduates' Electronic Mail." *Computers in Human Behavior* **8**: 379-405.

McGuire, W.J. (1985). "Attitudes and Attitude Change." In: *The Handbook of Social Psychology II* . Aronson, L. (Ed.), New York, NJ, Random House.

McGuire, T.W., Kiesler, S., Siegel, J. (1987). "Group and Computer-Mediated Discussion Effects in Risk Decision Making." *Journal of Personality and Social Psychology* **52**: 917-930.

McLaughlin, M.L., Osborne, K.K., Smith, C.B. (1995). "Standards of conduct on Usenet." In: *Cybersociety*, Jones, S.G. (Ed.). Thousand Oaks/London/New Delhi, SAGE Publications: 90-111.

McWilliam, G. (2000). "Building Stronger Brands through Online Communities." *Sloan Management Review* (Spring): 43-54.

Mead, G.H. (1938). *The Philosophy of the Act*. Morris, Ch.W. (Ed.), Chicago, IL, Chicago University Press.

Mehta, R., Sivadas, E. (1995). "Comparing Response Rates and Response Content in Mail Versus Electronic Surveys." *Journal of Market Research Society* **37** (4): 429-440.

Milligan, G.W. (1994). "Cluster Validation: Results and Implications for Applied Analyses." In: *Clustering and Classification*. Arabie, P., Hubert, L., DeSoete, G. (Eds.), River Edge, NJ, World Scientific.

Milligan, G.W., Cooper, M.C. (1985). "An Examination of Procedures for Determining the Number of Clusters in a Data Set." *Psychometrika* **50** (2): 159-79.

Milligan, G.W., Cooper, M.C. (1988). "A Study of Standardization of Variables in Cluster Analysis." *Journal of Classification* **5**: 181-204.

Miniard, P.W., Cohen, J.E. (1983). "Modeling Personal and Normative Influences on Behavior." *Journal of Consumer Research* **10** (September): 169-180.

Mitra, A. (1999). "Characteristics of the WWW Text: Tracing Discursive Strategies." *Journal of Computer-Mediated Communication* **5** (1). Available online: http://www.ascusc.org/jcmc

Mizerski, R.W. (1982). "An Attribution Explanation of the Disproportionate Influence of Unfavorable Information." *Journal of Consumer Research* **9** (December): 301-310.

Moorthy, S., Ratchford, B.T., Talukdar, D. (1997). "Consumer Information Search Revisited: Theory and Empirical Analysis." *Journal of Consumer Research* **23** (March): 263-277.

Mowday, R.T., Steers, R.M., Porter, L.W. (1979). "The Measurement of Organizational Commitment." *Journal of Vocational Behavior* **14**: 224-227.

Muniz, A.M.jr., O'Guinn Th.C. (2001). "Brand Community." *Journal of Consumer Research* **27** (March): 412-432.

Naples, M.J. (1979). *Effective Frequency: The Relationship between Frequency and Advertising Effectiveness*. New York, NJ, Association of National Advertisers, Inc.

Naples, M.J. (1997). "Effective Frequency: Then and Now." *Journal of Advertising Research* **37** (4): 7-13.

Naughton, J. (1999). *A Brief History of the Future. The Origins of the Internet*. London, Weidenfeld & Nicolson.

Nielsen//Netratings (2003a). *42% van de Europese Internet Populatie is Vrouwelijk*. Oxford, U.K., Nielsen//Netratings. Available online: http://www.nielsen-netratings.com

Nielsen//Netratings (2003b). *1 Miljoen Nederlandse Kinderen Zijn Online*. Oxford, U.K., Nielsen//Netratings. Available online: http://www.nielsen-netratings.com

Okleshen, C., Grossbart, S. (1998). "Usenet Groups, Virtual Community and Consumer Behavior." In: *Advances in Consumer Research* **25**, Alba, J.W., Hutchinson, J.W. (Eds.), Provo, UT, Association for Consumer Research: 276-282.

Oliver, R.L. (1980). "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions." *Journal of Marketing Research* **17** (November): 460-469.

Oostveen, R. (2001). *Virtuele Gemeenschappen: de Killer App voor Online Marketing*. Amsterdam, Pearson Education.

Paccagnella, L. (1997). "Getting the Seats of Your Pants Dirty: Strategies for Ethnographic Research on Virtual Communities." *Journal of Computer-Mediated Communication* **3** (1). Available online: http://www.ascusc.org/jcmc

Park, C.W., Lessig, P.V. (1977). "Students and Housewives: Differences in Susceptibility to Reference Group Influence." *Journal of Consumer Research* **4** (September): 102-110.

Parks, M.R., Floyd, K. (1996). "Making Friends in Cyberspace." *Journal of Computer-Mediated Communication* **1** (4). Available online: http://www.ascusc.org/jcmc

Parks, M.R., Roberts, L.D. (1998). "Making MOOsic: The Development of Personal Relationships Online and a Comparison to their Offline Counterparts." *Journal of Social and Personal Relationships* **15**: 517-537.

Percy, L., Rossiter, J.R. (1980). *Advertising Strategy: a Communication Theory Approach*. New York, NJ, Praeger Publishers.

Pitts, R.E., Woodside, A.G. (1991). "Special Issue: Examining the Structure of Personal Values and Consumer Decision Making." *Journal of Business Research* **22**: 91-93.

Postmes, T., Spears, R., Lea, M. (1999). "Social Identity, Normative Content and 'Deindividuation' in Computer-mediated Groups." In: *Social Identity*, Ellemers, N. Spears R., Doosje B. (Eds.). Oxford, Blackwell Publishers: 164-183.

Powazek, D.M. (2001). *Design for Community. The Art of Connecting Real People in Virtual Places*. Berkeley, CA, New Riders Press.

Preece, J. (2000). *Online Communities: Designing Usability, Supporting Sociability*. West Sussex, John Wiley & Sons, Ltd.

Price, L.L., Feick, L.F. (1984). "The Role of Interpersonal Sources and External Search: An Informational Perspective." In: *Advances in Consumer Research* **11**, Kinnear, Th.C. (Ed.), Provo, UT, Association for Consumer Research: 250-255.

Punj, G.N., Stewart, D.W. (1983). "An Interaction Framework of Consumer Decision Making." *Journal of Consumer Research* **10** (September): 181-196.

Pyszczynski, T., Greenberg, J., LaPrelle, J. (1985). "Social Comparison after Success and Failure: Biased Search for Information Consistent with a Self-Serving Conclusion." *Journal of Experimental Psychology* **21**: 195-211.

Rae Bachmann, G., Roedder John., D., Rao, A.R. (1992). "Children's Susceptibility to Peer Group Purchase Influence: An Exploratory Investigation." In: *Advances in Consumer Research* **20**, McAllister, L., Rothschild, M.L. (Eds.), Provo, UT, Association for Consumer Research: 463-468.

Rainie, L., Packel, D. (2001). *More Online, Doing More*. Washington, D.C., Pew Internet & American Life Project. Available online: http://www.pewinternet.org/reports

Ranchhod, A., Zhou, F. (2001). "Comparing Respondents of Email and Mail Surveys: Understanding the Implications of Technology." *Marketing Intelligence and Planning* **19** (4): 254-262.

Reid, E.M. (1993). "Electronic Chat: Social Issues on Internet Relay Chat." *Media Information* **67**: 62-70.

Reid, E.M. (1999). "Hierarchy and Power: Social Control in Cyberspace." In: *Communities in Cyberspace*. Smith, M.A, Kollock, P. (Eds.) London, Routledge: 107-134.

Reilly, M.D. (1982). "Working Wives and Convenience Consumption." *Journal of Consumer Research* **8** (December): 407-419.

Reilly, M.D., Wallendorf, M. (1987). "A Comparison of Group Difference in Food Consumption Using Household Refuse." *Journal of Consumer Research* **14** (June): 289-295.

Reingen, P. H., Foster, B.L., Johnson Brown, J., Seidman, S.B. (1984). "Brand Congruence in Interpersonal Relations: A Social Network Analysis." *Journal of Consumer Research* **11** (December): 771-783.

Reynolds, F.D., Darden, W.R. (1971). "Mutually Adaptive Effects of Interpersonal Communication." *Journal of Marketing Research* **8** (November): 449-454.

Reynolds, Th.J., Gutman, J. (1984). "Advertising is Image Management." *Journal of Advertising Research* **24** (February/March): 27-36.

Rheingold, H. (1993). *The Virtual Community: Homesteading on the Electronic Frontier*. New York, NJ, HarperCollins.

Rice, R.E., Case, D. (1983). "Electronic Message Systems in the University: A Description of Use and Utility." *Journal of Communication* **33**: 131-152.

Rice, R.E., Love, G. (1987). "Electronic Emotion: Socio-emotional Content in a Computer-Mediated Network." *Communication Research* **14**: 85-108.

Richins, M.L. (1983). "Negative Word-of-Mouth by Dissatisfied Consumers: A Pilot Study." *Journal of Marketing* **47** (Winter): 68-78.

Richins, M.L., Bloch, P.H. (1986). "After the New Wears Off: the Temporal Context of Product Involvement." *Journal of Consumer Research* **13** (September): 280-285.

Richins, M.L., Bloch, P.H. (1991). "Post-Purchase Product Satisfaction: Incorporating the Effects of Involvement and Time." *Journal of Business Research* **23:** 145-158.

Roberts, L.D., Smith, L.M., Pollock, C. (1997). "U r a Lot Bolder on the Net: The Social Use of Text-Based Virtual Environments by Shy Individuals." Conference Proceedings *International Conference on Shyness and Self-Conciousness*, Cardiff, Wales. Available at: http://psych.curtin.edu.au/people/roberts/shy.html.

Rogers, E.M. (1983). *Diffusion of Innovations*. New York, NY, Free Press.

Rokeach, M. (1973). *Understanding Human Values*. New York, NY, Free Press.

Rossiter, J.R., Percy, L. (1997). *Advertising Communications & Promotion Management*. New York, NJ, McGraw-Hill Companies, Inc.

Rothaermel, F.T., Sugiyama, S. (2001). "Virtual Internet Communities and Commercial Success: Individual and Community-Level Theory Grounded in the Atypical Case of TimeZone.com." *Journal of Management* **27** (3): 297-312.

Sanèanin, M. (2000). "Naar Community Marketing; Een Onderzoek naar de Virtuele Gemeenschap SmulWeb." *Master thesis – Communication Studies, Radboud University Nijmegen*.

Schaefer, R., Dillman, D.A. (1998). "Development of a Standard Email Methodology: Results of an Experiment." *Public Opinion Quarterly* **62** (3): 378-397.

Scholderer, J., Bruno, K., Grunert, K.G., Poulsen, C.S., Thogersen, J. (2001). "The Changing Importance of Quality Aspects in Food Consumption." *European Advances in Consumer Research* **5**: 5-10.

Schouten, J.W., McAlexander, J.H. (1995). "Subcultures of Consumption: An Ethnography of the New Bikers." *Journal of Consumer Research* **22** (June): 43-61.

Shankara, V., Smith, A.K., Rangaswamy, A. (2003). "Customer Satisfaction and Loyalty in Online and Offline Environments." *International Journal of Research in Marketing* **20**: 153-175.

Sharf, B.F. (1999). "Beyond Netiquette: The Ethics of Doing Naturalistic Discourse Research on the Internet." In: *Doing Internet Research: Critical Issues and Methods for Examining the Net*, Jones, S.G. (Ed.), Thousand Oaks/London/New Delhi, SAGE Publications: 243-256.

Sherry, J.F. (1995). "Marketing and Consumer Behavior; Into the Field" In: *Contemporary Marketing and Consumer Behavior; An Anthropological Sourcebook*, Sherry, J.F. (Ed.), Thousand Oaks/London/New Delhi, SAGE Publications: 3-44.

Sherry, J.F., Kozinets, R.V. (2000). "Qualitative Inquiry in Marketing and Consumer Research." In: *Kellogg on Marketing*. Iacobucci, D. (Ed.), New York, NJ, John Wiley & Sons: 165-194.

Short, J.A., Williams, E., Christie, B. (1976). *The Social Psychology of Telecommunications*. London, John Wiley & Sons.

Spiggle, S. (1994). "Analysis and Interpretation of Qualitative Data in Consumer Research." *Journal of Consumer Research* **21** (December): 491-503.

Sproull, L., Kiesler, S. (1986). "Reducing Social Context Cues: Electronic Mail in Organizational Communication." *Management Science* **23** (11): 1492-1512.

Srinivasan, N., Ratchford, B.T. (1991). "An Empirical Test of a Model of External Search for Automobiles." *Journal of Consumer Research* **18** (September): 233-242.

Strate, L., Jacobson, R., Gibson, S.B. (1996). "Surveying the Electronic Landscape: an Introduction to Communication and Cyberspace." In: *Communication and Cyberspace: Social Interaction in an Electronic Environment*. Strate, L., Jacobson, R., Gibson, S.B. (Eds.), Cresskill, Hampton Press: 1-23.

Sudweeks, F., Rafaeli, S. (1995). "How Do You Get a Hundred Strangers to Agree? Computer-Mediated Communication and Collaboration." In: *Computer Networking and Scholarship in the 21st Century*. Harrison, T.M., Stephen, Th. (Eds.), New York, NJ, SUNY Press: 115-136.

Sujan, M. (1985). "Consumer Knowledge: Effects on Evaluation Strategies Mediating Consumer Judgments." *Journal of Consumer Research* **12** (June): 31-46.

Sundaram, D.S., Mitra, K., Webster, C. (1998). "Word-of-Mouth Communications: A Motivational Analysis." In: *Advances in Consumer Research* **25**, Alba, J.W., Hutchinson, J.W., (Eds.), Provo, UT, Association for Consumer Research: 527-531.

Swartz, T.A., Stephens, N. (1984). "Information Search for Services: The Maturity Segment." In: *Advances in Consumer* Research **11**, Kinnear, Th.C. (Ed.), Provo, UT, Association for Consumer Research: 244-249.

Tewksbury, D., Weaver, A.J., Maddex, B.D. (2001). "Accidentally Informed: Incidental News Exposure on the World Wide Web." *Journalism and Mass Communication Quarterly* **78** (3): 533-554.

Thompsen, P.A. (1996). "What's Fuelling the Flames of Cyberspace? A Social Influence Model." In: *Communication and Cyberspace: Social Interaction in an Electronic Environment*, Strate, L., Jacobsen, R. & Gibson, S.B. (Eds.), Cresskill, Hampton Press: 297-317.

Thompson, C.J., Troester, M. (2002). "Consumer Value Systems in the Age of Postmodern Fragmentation: The Case of the Natural Health Microculture." *Journal of Consumer Research* **28** (March): 550-571.

Thompson, C.J. (1997). "Interpreting Consumers: A Hermeneutical Framework for Deriving Marketing Insights from the Texts' of Consumers' Consumption Stories." *Journal of Marketing Research* **34** (November): 438-455.

Thomsen, S.R., Straubhaar, J.D., Bolyard, D.M. (1998). "Ethnomethodology and the Study of Online Communities: Exploring the Cyberstreets." Conference Proceedings *IRISS*, Bristol.

Tse, A.C.B. (1998). "Comparing Response Rate, Response Speed and Response Quality of Two Methods of Sending Questionnaires: Email vs. Mail." *Journal of the Market Research Society* **40** (4): 353-362.

Tse, A.C.B., Tse, K.C., Yin, C.H., Ting, C.B., Hong, W.C. (1995). "Comparing Two Methods for Sending out Questionnaires: Email vs. Mail." *Journal of the Market Research Society* **37** (4): 441-446.

Tse, D.K., Wilton, P.C. (1988). "Models of Consumer Satisfaction: An Extension." *Journal of Marketing Research* **25** (May): 204-212.

Utz, S. (2000). "Social Information Processing in MUDs: The Development of Friendships in Virtual Worlds." *Journal of Online Behavior* **1** (1).

Venkatesan, M. (1966). "Experimental Study of Consumer Behavior Conformity and Independence." *Journal of Marketing Research* **3** (November): 384-387.

Venkatraman, M.P. (1988). "Investigating Differences in the Roles of Enduring and Instrumentally Involved Consumers in the Diffusion Process." In: *Advances in Consumer Research* **15**, Houston, M.J. (Ed.), Provo, UT, Association for Consumer Research: 299-303.

Venkatraman, M.P. (1990). "Opinion Leadership: Enduring Involvement and Characteristics of Opinion Leaders: A Moderating or Mediating Relationship." In: *Advances in Consumer*

Research **17**, Goldberg, M.E., Gorn, G., Pollay, R.W. (Eds.), Provo, UT, Association for Consumer Research: 60-67.

Wallace, P. (1999). *The Psychology of the Internet*. Cambridge, MA, Cambridge University Press.

Walther, J.B. (1992). "Interpersonal Effects in Computer-Mediated Interaction: a Relational Perspective." *Communication Research* **19** (1): 52-90.

Walther, J.B. (1994). "Anticipated Ongoing Interaction Versus Channel Effects on Relational Communication in Computer-Mediated Interaction." *Human Communication Research* **20**: 473-501.

Walther, J.B. (1995). "Relational Aspects of Computer-Mediated Communication: Experimental Observations Over Time." *Organization Science* **6**: 186-203.

Walther, J.B., Tidwell, L.C. (1995). "Nonverbal Cues in Computer-Mediated Communication and the Effects of Chronemics on Relational Communication." *Journal of Organizational Computing* **5** (4): 355-370.

Walther, J.B. (1996). "Computer-Mediated Communication: Impersonal, Interpersonal, and Hyperpersonal Interaction." *Communication Research* **23**: 3-43.

Wang, Y., Yu, Q., Fessenmaier, D.R. (2002). "Defining the Virtual Tourist Community: Implications for Tourism Marketing." *Tourism Management* **23**: 407-417.

Ward, K.J. (1999). "The Cyber-ethnographic (Re)Construction of Two Feminist Online Communities." *Sociological Research Online* **4** (1). Available online: http://www.socioresonline.org.uk/socioresonline/4/1ward.html.

Ward, J.C., Reingen, P.H. (1990). "Sociocognitive Analysis of Group Decision-Making." *Journal of Consumer Research* **17** (December): 245-262.

Warisse Turner, J., Grube, J.A., Meyers, J. (2001). "Developing an Optimal Match Within Online Communities: An Exploration of CMC Support Communities and Traditional Support." *Journal of Communication* (June): 231-251.

Watson, N. (1997). "Why We Argue About Virtual Community: a Case Study of the Phish.Net Fan Community." In: *Virtual Culture: Identity & Communication in Cybersociety*. Jones, S.G. (Ed.). Thousand Oaks/London/New Delhi, SAGE Publications: 102-133.

Wedel, M., Kamakura, W.A. (1998). *Market Segmentation: Conceptual and Methodological Foundations*. Boston/Dordrecht/London, Kluwer Academic Publishers.

Weible, R., Wallace, J. (1998). "The Impact of Internet on Data Collection." *Market Research* **10** (3): 19-23.

Wellman, B., Salaff, J., Dimitrova, D. (1996). "Computer Networks as Social Networks: Collaborative Work, Telework, and Virtual Community." *Annual Review of Sociology* **22**: 213-238.

Wellman, B., Gulia, M. (1999). "Virtual Communities as Communities: Net Surfers Don't Ride Alone." In: *Communities in Cyberspace*. Smith, M.A, Kollock, P. (Eds.), London, Routledge: 167-195.

Wenger, E.C. (1998). Communities of Practice: Learning, Meaning, and Identity. Cambridge, UK, Cambridge University Press.

Wenger, E.C., McDermott, R.A., Snyder, W.M (2002). *Cultivating Communities of Practice: A Guide to Managing Knowledge*. Boston, MA, Harvard Business School Press.

Wicks, R.H. (1992). "Improvement Over Time in Recall of Media Information: An Exploratory Study." *Journal of Broadcasting and Electronic Media* **36**: 287-302.

Williams, R. L., Cothrel, J. (2000). "Four Smart Ways to Run Online Communities." *Sloan Management Review* (Summer).

Wilkie, W.L. (1986). *Consumer Behavior*. New York, NJ, Wiley.

Witt, R.E., Bruce, G.D. (1972). "Group Influence and Brand Choice." *Journal of Marketing Research* **9** (November): 440-443.

Yale, L.J., Gilly, M.C. (1995). "Dyadic Perceptions in Personal Source Information Search." *Journal of Business Research* **32**: 225-237.

Yi, Y. (1990). "The Determinants of Consumer Satisfaction: The Moderating Role of Ambiguity." In: *Advances in Consumer Research* **20**, McAllister, L., Rothschild, M.L., (Eds.), Ann Arbor, MI, Association for Consumer Research: 502-506.

Yun, G.W, Trumbo, C.W. (2000). "Comparative Response to a Survey Executed by Post, E-mail, & Web form." *Journal of Computer-Mediated Communication* **6** (1). Available online: http://www.ascusc.org/jcmc

Zeithaml, V. (1981). "How Consumer Evaluation Processes Differ Between Goods and Services." In: *Marketing of Services*, Donelly, J.H., George, W.R. (Eds.), Chicago, IL, American Marketing Association: 186-190.

APPENDIX A

Original SmulWeb survey

Welkom bij de SmulWeb-enquête verzorgd door de Erasmus Universiteit Rotterdam

Hartelijk dank voor het meedoen aan dit onderzoek. Onder de inzenders van een volledig ingevulde enquête worden drie dinerbonnen en vier Tip Culinair kookboeken verloot. Om hiervoor in aanmerking te komen moet u aan het einde van de enquête uw gebruikersnaam op SmulWeb en emailadres invullen, zodat we contact kunnen opnemen met de winnaars.

De vragenlijst beslaat in totaal 52 vragen. De eerste 8 vragen hebben betrekking op uw Internetgedrag in het algemeen. Daarna volgen 29 vragen over uw lidmaatschap van SmulWeb. Tenslotte worden u 15 achtergrondvragen gesteld. De door u verstrekte informatie zal alleen voor wetenschappelijke doeleinden worden gebruikt. Uw gegevens worden vertrouwelijk behandeld en niet aan derden ter beschikking gesteld.

Het invullen van de enquête duurt ongeveer 20-30 minuten.

1. Sinds wanneer maakt u gebruik van Internet?

- ○ 2002
- ○ 2001
- ○ 2000
- ○ 1999
- ○ 1998
- ○ 1997
- ○ Eerder dan 1997

2. Vanaf welke locatie maakt u gebruik van Internet? (meerdere antwoorden mogelijk)

- ☐ Thuis
- ☐ Werkplek
- ☐ Onderwijsinstelling
- ☐ Bij familie/vriend/kennis
- ☐ Internetcafé
- ☐ Bibliotheek
- ☐ Anders, namelijk [ ]

3. Hoeveel uur per week maakt u gemiddeld gesproken actief gebruik van Internet voor *privé* doeleinden?

[ ] uur voor privé doeleinden

4. Hoeveel uur per week maakt u gemiddeld gesproken actief gebruik van Internet voor *zakelijke* doeleinden?

[ ] uur voor zakelijke doeleinden

5. Hoeveel uur per week maakt u gemiddeld gesproken actief gebruik van Internet voor *studie* doeleinden?

[ ] uur voor studie doeleinden

6. Hoe vaak gebruikt u Internet voor...?

	nooit	-	niet weinig/niet vaak	-	heel vaak
a. E-mail	○	○	○	○	○
b. Chatten	○	○	○	○	○
c. Discussie-/nieuwsgroepen	○	○	○	○	○
d. Internetgemeenschappen	○	○	○	○	○
e. Informatie opvragen m.b.t. producten/diensten	○	○	○	○	○
f. Informatie opvragen m.b.t. hobby/interesse	○	○	○	○	○
g. Informatie opvragen m.b.t. medische zaken/gezondheid	○	○	○	○	○
h. Kopen van producten/diensten	○	○	○	○	○
i. Downloaden van audio/video/games	○	○	○	○	○
j. Entertainment	○	○	○	○	○
k. Websites bouwen/onderhouden	○	○	○	○	○

7. Heeft u ooit iets gekocht via Internet?

○ Nee

○ Ja, namelijk (noem producten/diensten) [ ]

8. Bent u naast SmulWeb nog lid van andere Internetgemeenschappen (ook wel online communities genoemd)?

○ Nee

○ Ja, namelijk (geef www-adressen) [ ]

9. Hoe lang bent u geregistreerd lid van SmulWeb?

- ○ Minder dan 6 maanden
- ○ Minstens 6 maanden, maar minder dan 1 jaar
- ○ Minstens 1 jaar, maar minder dan 1½ jaar
- ○ Minstens 1½ jaar, maar minder dan 2 jaar
- ○ 2 jaar of langer

10. Wat is de belangrijkste reden waarom u lid bent geworden van SmulWeb?

- ○ Uit interesse voor culinaire zaken
- ○ Voor de sociale contacten
- ○ Voor het verzamelen van recepten
- ○ Uit professionele interesse
- ○ Voor het plezier
- ○ Anders, namelijk _____

11. Op welke locatie bevindt zich de Internetaansluiting die u meestal gebruikt om een bezoek te brengen aan SmulWeb?

- ○ Thuis
- ○ Werkplek
- ○ Onderwijsinstelling
- ○ Bij familie/vriend/kennis
- ○ Internetcafé
- ○ Bibliotheek
- ○ Anders, namelijk _____

12. Zijn er voor u kosten verbonden aan de Internetaansluiting die u meestal gebruikt om een bezoek te brengen aan SmulWeb?

- ○ Ja, ik betaal inbelkosten voor de duur dat ik aan het Internetten ben.
- ○ Ja, ik betaal een vast bedrag per maand voor de Internetaansluiting.
- ○ Ja, ik betaal een kabelabonnement.
- ○ Nee, ik betaal niets.
- ○ Anders, namelijk _____

13. Hoe vaak bezoekt u SmulWeb gemiddeld per week/maand?

- ○ dagelijks meerdere keren
- ○ 6-7 keer per week
- ○ 4-5 keer per week
- ○ 2-3 keer per week
- ○ 1 keer per week
- ○ 2-3 keer per maand
- ○ Minder vaak

14. Op welke dag(en) brengt u meestal een bezoek aan SmulWeb? (meerdere antwoorden mogelijk)

- ☐ Maandag
- ☐ Dinsdag
- ☐ Woensdag
- ☐ Donderdag
- ☐ Vrijdag
- ☐ Zaterdag
- ☐ Zondag

15. Op welk(e) tijdstip(pen) van de dag brengt u meestal een bezoek aan SmulWeb? (meerdere antwoorden mogelijk)

- ☐ 06.00-08.00 uur
- ☐ 08.00-10.00 uur
- ☐ 10.00-12.00 uur
- ☐ 12.00-14.00 uur
- ☐ 14.00-16.00 uur
- ☐ 16.00-18.00 uur
- ☐ 18.00-20.00 uur
- ☐ 20.00-22.00 uur
- ☐ 22.00-24.00 uur
- ☐ 00.00-02.00 uur
- ☐ 02.00-04.00 uur
- ☐ 04.00-06.00 uur

16. Hoe lang duurt uw bezoek aan SmulWeb gemiddeld per keer?

- ○ Minder dan 15 minuten
- ○ Minstens 15 minuten, maar minder dan een ½ uur
- ○ Minstens een ½ uur, maar minder dan 1 uur
- ○ Minstens 1 uur, maar minder dan 1½ uur
- ○ Minstens 1½ uur, maar minder dan 2 uur
- ○ 2 uur of langer

17. Hoe vaak onderneemt u de volgende activiteiten op SmulWeb?

	nooit	-	niet weinig/niet vaak	-	heel vaak
a. Rondsurfen bij de verschillende onderdelen van SmulWeb.	○	○	○	○	○
b. Informatie aanleveren in de vorm van recepten.	○	○	○	○	○
c. Informatie aanleveren in de vorm van artikelen.	○	○	○	○	○
d. Informatie aanleveren in de vorm van recensies.	○	○	○	○	○
e. Informatie opzoeken in de vorm van recepten.	○	○	○	○	○
f. Informatie opzoeken in de vorm van artikelen.	○	○	○	○	○
g. Informatie opzoeken in de vorm van recensies.	○	○	○	○	○
h. Een oproep plaatsen.	○	○	○	○	○
i. Op een oproep reageren.	○	○	○	○	○
j. Een nieuw onderwerp beginnen in een forumdiscussie.	○	○	○	○	○
k. Bijdragen aan een bestaande forumdiscussie.	○	○	○	○	○
l. Deelnemen aan een chatsessie.	○	○	○	○	○
m. Mijn eigen Smulpagina aanpassen met informatie of plaatjes.	○	○	○	○	○
n. Mijn eigen Smulpagina uitbreiden met favorieten.	○	○	○	○	○
o. Mijn eigen Smulpagina bezoeken om nieuwe gastenboekberichten te lezen.	○	○	○	○	○
p. Gastenboekberichten achterlaten op de Smulpagina's van andere leden.	○	○	○	○	○

18. Hierna volgt een aantal stellingen over uw bezoeken aan SmulWeb. Kunt u aangeven in hoeverre u het met de stellingen eens bent?

	helemaal mee oneens	-	niet mee oneens/niet mee eens	-	helemaal mee eens
a. Als ik SmulWeb bezoek, heb ik vantevoren bedacht wat ik precies wil doen.	○	○	○	○	○
b. Mijn bezoeken aan SmulWeb zijn bedoeld als ontspanning en voor recreatie.	○	○	○	○	○
c. Ik bezoek SmulWeb voor het sociale contact met andere leden.	○	○	○	○	○
d. Ik bezoek SmulWeb om informatie toe te voegen.	○	○	○	○	○
e. Ik bezoek SmulWeb om informatie te verkrijgen.	○	○	○	○	○

19. Hierna volgt een aantal stellingen over uw betrokkenheid bij het algemene thema van SmulWeb: culinair genieten. Kunt u aangeven in hoeverre u het met de stellingen eens bent?

	helemaal mee oneens	-	niet mee oneens/niet mee eens	-	helemaal mee eens
a. Ik hou van koken.	○	○	○	○	○
b. Ik ben een goede kok.	○	○	○	○	○
c. Ik organiseer regelmatig etentjes voor familie, vrienden en/of kennissen.	○	○	○	○	○
d. Ik ben erin geïnteresseerd mijn kennis op culinair gebied te vergroten.	○	○	○	○	○
e. Ik volg de media voor tips, recepten en nieuws op culinair gebied.	○	○	○	○	○
f. Ik ben goed op de hoogte van nieuwe voedingsproducten en/of dranken.	○	○	○	○	○
g. Ik kies de restaurants waar ik uit eten ga altijd met zorg uit.	○	○	○	○	○
h. Ik geef veel geld uit aan lekker eten en drinken.	○	○	○	○	○
i. In gesprekken met mijn vrienden komen recepten en bereidingswijzen van gerechten regelmatig aan de orde.	○	○	○	○	○

20. Hierna volgt een aantal stellingen over uw betrokkenheid bij de community SmulWeb: de gemeenschap van leden. Kunt u aangeven in hoeverre u het met de stellingen eens bent?

	helemaal mee oneens	-	niet mee oneens/niet mee eens	-	helemaal mee eens
a. Ik voel me (mede-)verantwoordelijk voor het instandhouden van een goede sfeer op SmulWeb.	○	○	○	○	○
b. Ik zou net zo goed lid kunnen zijn van een andere Internetgemeenschap over culinaire zaken.	○	○	○	○	○
c. Ik ben er trots op anderen te vertellen dat ik lid ben van SmulWeb.	○	○	○	○	○
d. Interactie met SmulWeb-leden is voor mij belangrijk.	○	○	○	○	○
e. Ik besteed veel tijd aan het onderhouden van contact met SmulWeb-leden.	○	○	○	○	○
f. Ik beleef veel plezier aan de communicatie met SmulWeb-leden.	○	○	○	○	○
g. Ik heb via SmulWeb relaties opgebouwd met mensen die ik nog niet eerder kende en die een zinvolle plaats innemen in mijn leven.	○	○	○	○	○
h. Van de SmulWeb-leden met wie ik het meeste online contact heb, kende ik het merendeel al voordat ik lid van SmulWeb werd.	○	○	○	○	○
i. Ik ben geïnteresseerd in de persoonlijke achtergrond van SmulWeb-leden.	○	○	○	○	○

21. Kunt u aangeven hoe belangrijk de hieronder genoemde bronnen voor u zijn voor het verkrijgen van *receptinformatie*?

	heel onbelangrijk	-	niet onbelangrijk/niet belangrijk	-	heel belangrijk
a. Familie/vrienden/bekenden	○	○	○	○	○
b. Tijdschriften/kranten	○	○	○	○	○
c. Kookboeken/gidsen	○	○	○	○	○
d. Televisie/radio	○	○	○	○	○
e. SmulWeb	○	○	○	○	○
f. Andere Internetbronnen	○	○	○	○	○
g. Overige bronnen	○	○	○	○	○

22. Kunt u aangeven hoe belangrijk de hieronder genoemde bronnen voor u zijn voor het verkrijgen van informatie over *restaurants*?

	heel onbelangrijk	-	niet onbelangrijk/niet belangrijk	-	heel belangrijk
a. Familie/vrienden/bekenden	○	○	○	○	○
b. Tijdschriften/kranten	○	○	○	○	○
c. Kookboeken/gidsen	○	○	○	○	○
d. Televisie/radio	○	○	○	○	○
e. SmulWeb	○	○	○	○	○
f. Andere Internetbronnen	○	○	○	○	○
g. Overige bronnen	○	○	○	○	○

23. Kunt u aangeven hoe belangrijk de hieronder genoemde bronnen voor u zijn voor het verkrijgen van informatie over *keukenapparatuur*?

	heel onbelangrijk	-	niet onbelangrijk/niet belangrijk	-	heel belangrijk
a. Familie/vrienden/bekenden	○	○	○	○	○
b. Tijdschriften/kranten	○	○	○	○	○
c. Kookboeken/gidsen	○	○	○	○	○
d. Televisie/radio	○	○	○	○	○
e. SmulWeb	○	○	○	○	○
f. Andere Internetbronnen	○	○	○	○	○
g. Overige bronnen	○	○	○	○	○

24. U kunt SmulWeb als informatiebron aantrekkelijk vinden om verschillende redenen. Kunt u aangeven hoe belangrijk de hieronder genoemde factoren voor u zijn?

	heel onbelangrijk	-	niet onbelangrijk/niet belangrijk	-	heel belangrijk
a. De informatie op SmulWeb speelt in op de actualiteit.	○	○	○	○	○
b. De informatie op SmulWeb is divers en veelomvattend.	○	○	○	○	○
c. De informatie op SmulWeb is betrouwbaar.	○	○	○	○	○
d. De informatie op SmulWeb getuigt van deskundigheid.	○	○	○	○	○
e. De informatie op SmulWeb kan snel en effectief opgezocht worden.	○	○	○	○	○
f. De informatie op SmulWeb is tegen geringe kosten verkrijgbaar.	○	○	○	○	○
g. De informatie op SmulWeb is gemakkelijk toegankelijk.	○	○	○	○	○
h. De informatie op SmulWeb heeft een niet-commercieel karakter.	○	○	○	○	○
i. De informatie op SmulWeb is afkomstig van "gewone" mensen.	○	○	○	○	○
j. De informatie op SmulWeb is afkomstig van veel verschillende mensen.	○	○	○	○	○

25. De SmulWeb-gemeenschap bestaat uit een groot aantal personen. Van hoeveel SmulWeb-leden herkent u de gebruikersnaam?

- ○ Geen enkel lid
- ○ Minder dan 5 leden
- ○ Minstens 5 leden, maar minder dan 10 leden
- ○ Minstens 10 leden, maar minder dan 15 leden
- ○ Minstens 15 leden, maar minder dan 20 leden
- ○ Meer dan 20 leden

26. Met hoeveel SmulWeb-leden heeft u online contact via de gastenboeken, forums of chat van SmulWeb?

- ○ Geen enkel lid
- ○ Minder dan 5 leden
- ○ Minstens 5 leden, maar minder dan 10 leden
- ○ Minstens 10 leden, maar minder dan 15 leden
- ○ Minstens 15 leden, maar minder dan 20 leden
- ○ Meer dan 20 leden

27. SmulWeb-leden kunnen in het dagelijks leven behoren tot uw familie, vrienden- en/of kennissenkring. Met hoeveel SmulWeb-leden heeft u in het echt contact, dus niet alleen via SmulWeb?

- ○ Geen enkel lid
- ○ Minder dan 5 leden
- ○ Minstens 5 leden, maar minder dan 10 leden
- ○ Minstens 10 leden, maar minder dan 15 leden
- ○ Minstens 15 leden, maar minder dan 20 leden
- ○ Meer dan 20 leden

28. Als u informatie van SmulWeb haalt, is deze dan meestal afkomstig van...?

- ○ Een u onbekend SmulWeb-lid.
- ○ Een SmulWeb-lid van wie u de gebruikersnaam herkent, maar met wie u geen online/offline contact heeft.
- ○ Een SmulWeb-lid met wie u online contact heeft via gastenboeken, forums of chat.
- ○ Een SmulWeb-lid die in het dagelijkse leven behoort tot uw familie, vrienden- en/of kennissenkring.

29. Wellicht vindt u de bijdragen van SmulWeb-leden niet allemaal even interessant en waardevol. Kunt u aangeven hoe belangrijk de hieronder genoemde factoren voor u zijn bij uw beoordeling van hun bijdragen?

	heel onbelangrijk	-	niet onbelangrijk/niet belangrijk	-	heel belangrijk
a. De gebruikersnaam is bij mij bekend.	○	○	○	○	○
b. Ik heb regelmatig online contact met het lid (bijvoorbeeld in een forum, tijdens de chat, of via de gastenboeken).	○	○	○	○	○
c. Ik ontmoet het lid ook wel eens in het echt.	○	○	○	○	○
d. Het lid heeft specifieke deskundigheid over het onderwerp.	○	○	○	○	○
e. Het lid heeft veel bijdragen op SmulWeb staan.	○	○	○	○	○
f. Het lid weet veel over culinaire zaken in het algemeen.	○	○	○	○	○
g. Het lid is/lijkt me een aardig persoon.	○	○	○	○	○
h. Er zijn veel overeenkomsten tussen mij en het lid/we zijn ongeveer hetzelfde.	○	○	○	○	○
i. Het lid heeft persoonlijke informatie over zich/haarzelf verstrekt op zijn/haar Smulpagina.	○	○	○	○	○

30. Door uw SmulWeb-lidmaatschap bent u wellicht beter op de hoogte over allerlei culinaire zaken. Hoeveel invloed heeft uw SmulWeb-lidmaatschap gehad op uw kennis over...?

	geen invloed	-	niet weinig/niet veel invloed	-	heel veel invloed
a. Soorten keukens, zoals de biologische keuken, multiculturele keuken, slanke keuken, Italiaanse keuken, etc.	○	○	○	○	○
b. Bereidingswijzen, zoals barbecue, grilleren, roosteren, stomen, etc.	○	○	○	○	○
c. Ingrediënten, zoals drank, groenten, kruiden, zuivel, etc.	○	○	○	○	○
d. Gerechten, zoals banket, ovenschotels, salades, soepen, etc.	○	○	○	○	○
e. Prijsklassen van restaurants	○	○	○	○	○
f. Kwaliteit van restaurants	○	○	○	○	○
g. Originaliteit van restaurants	○	○	○	○	○
h. Bediening in restaurants	○	○	○	○	○
i. Prijs van keukenapparatuur	○	○	○	○	○
j. Kwaliteit van keukenapparatuur	○	○	○	○	○
k. Gebruiksgemak van keukenapparatuur	○	○	○	○	○
l. Handleiding van keukenapparatuur	○	○	○	○	○

31. Hoe goed bent u op de hoogte van culinaire zaken ten opzichte van...?

	veel slechter op de hoogte	-	niet slechter/niet beter op de hoogte	-	veel beter op de hoogte
a. Uw gezin	○	○	○	○	○
b. Uw familie	○	○	○	○	○
c. Uw vriendenkring	○	○	○	○	○
d. Uw kennissenkring	○	○	○	○	○
e. Andere SmulWeb-leden	○	○	○	○	○

32. Hierna volgt een aantal stellingen over de invloed van uw SmulWeb-lidmaatschap op uw kookvaardigheden. Kunt u aangeven in hoeverre u het met de stellingen eens bent?

	helemaal mee oneens	-	niet mee oneens/niet mee eens	-	helemaal mee eens
a. Als ik een gerecht ga maken, dan kijk ik altijd of ik een recept kan vinden bij SmulWeb.	○	○	○	○	○
b. Als ik een nieuw gerecht gemaakt heb, dan voeg ik het altijd als recept toe aan SmulWeb.	○	○	○	○	○
c. Door mijn SmulWeb-lidmaatschap ben ik vaker aan het experimenteren in de keuken dan voordat ik lid was.	○	○	○	○	○
d. Door mijn SmulWeb-lidmaatschap ben ik vaker gaan koken.	○	○	○	○	○
e. Door mijn SmulWeb-lidmaatschap is de variatie van gerechten die ik bereid toegenomen.	○	○	○	○	○
f. Door mijn SmulWeb-lidmaatschap maak ik nu andere keuzes voor gerechten dan voordat ik lid was.	○	○	○	○	○
g. Door mijn SmulWeb-lidmaatschap is de kwaliteit van de gerechten die ik bereid vooruitgegaan.	○	○	○	○	○
h. Door mijn SmulWeb-lidmaatschap ben ik over het algemeen meer tevreden over mijn kookprestaties dan voordat ik lid was.	○	○	○	○	○

33. Hierna volgt een aantal stellingen over de invloed van uw SmulWeb-lidmaatschap op uw restaurantbezoek. Kunt u aangeven in hoeverre u het met de stellingen eens bent?

	helemaal mee oneens	-	niet mee oneens/niet mee eens	-	helemaal mee eens
a. Als ik van plan ben om naar een restaurant te gaan, dan kijk ik altijd of er een recensie over dat restaurant op SmulWeb staat.	○	○	○	○	○
b. Als er een negatieve recensie over een restaurant op SmulWeb staat, dan zal ik nooit in dat restaurant gaan eten.	○	○	○	○	○
c. Als er een positieve recensie over een restaurant op SmulWeb staat, dan is dat een extra stimulans om dat restaurant te bezoeken.	○	○	○	○	○
d. Als ik naar een restaurant ben geweest, dan kijk ik altijd of er een recensie over geschreven is op SmulWeb om te zien wat andere leden ervan vonden.	○	○	○	○	○
e. Ik schrijf altijd recensies voor SmulWeb over de restaurants waar ik heb gegeten.	○	○	○	○	○
f. Door mijn SmulWeb-lidmaatschap ga ik ga vaker naar restaurants.	○	○	○	○	○
g. Door mijn SmulWeb-lidmaatschap maak ik nu andere keuzes voor restaurants dan voordat ik lid was.	○	○	○	○	○
h. Door mijn SmulWeb-lidmaatschap ben ik over het algemeen meer tevreden met mijn restaurantkeuze dan voordat ik lid was.	○	○	○	○	○

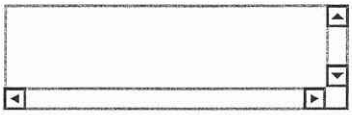
34. Hierna volgt een aantal stellingen over de invloed van uw SmulWeb-lidmaatschap op het aanschaffen van keukenapparatuur. Kunt u aangeven in hoeverre u het met de stellingen eens bent?

	helemaal mee oneens	-	niet mee oneens/niet mee eens	-	helemaal mee eens
a. Als ik van plan ben om een keukenapparaat te kopen, dan kijk ik altijd op SmulWeb of er iets over geschreven is.	○	○	○	○	○
b. Als er negatieve informatie over een keukenapparaat op SmulWeb staat, dan zal ik dat apparaat nooit kopen.	○	○	○	○	○
c. Als er positieve informatie over een keukenapparaat op SmulWeb staat, dan is dat een extra stimulans om dat apparaat te kopen.	○	○	○	○	○
d. Als ik een keukenapparaat heb gekocht, dan kijk ik altijd of er iets over geschreven is op SmulWeb om te zien wat andere leden ervan vinden.	○	○	○	○	○
e. Ik schrijf altijd iets voor SmulWeb over de keukenapparatuur die ik heb gekocht (bv. in een forum).	○	○	○	○	○
f. Door mijn SmulWeb-lidmaatschap koop ik vaker keukenapparatuur dan voordat ik lid was.	○	○	○	○	○
g. Door mijn SmulWeb-lidmaatschap maak ik andere keuzes voor de keukenapparaten die ik koop dan voordat ik lid was.	○	○	○	○	○
h. Door mijn SmulWeb-lidmaatschap ben ik over het algemeen meer tevreden over de keukenapparatuur die ik koop dan voordat ik lid was.	○	○	○	○	○

35. Wanneer heeft u voor het laatst iets bijzonders gekookt en wat was dat?

36. Wanneer heeft u voor het laatst in een restaurant gegeten en welk restaurant was dat?

37. Wanneer heeft u voor het laatst een keukenapparaat gekocht en wat was dat voor apparaat?



38. Hieronder volgt een aantal stellingen over de mate waarin u in het dagelijkse leven (dus niet via SmulWeb) advies geeft/ontvangt over culinaire zaken. Kunt u aangeven in hoeverre u het met de stellingen eens bent?

	helemaal mee oneens	-	niet mee oneens/niet mee eens	-	helemaal mee eens
a. Ik word vaak om advies gevraagd over culinaire zaken.	○	○	○	○	○
b. Mensen in mijn omgeving waarderen mijn mening over culinaire zaken.	○	○	○	○	○
c. Mijn vrienden komen vaker naar mij voor informatie over culinaire zaken dan dat ik hen om informatie op dit gebied vraag.	○	○	○	○	○
d. Ik word in het algemeen gezien als een goede bron van informatie op het gebied van culinaire zaken.	○	○	○	○	○
e. Ik wissel dikwijls informatie uit over culinaire zaken met vrienden.	○	○	○	○	○
f. Op het gebied van culinaire zaken telt de mening van andere mensen niet voor mij.	○	○	○	○	○
g. Ik vraag mensen in mijn omgeving vaak om tips en aanbevelingen op het gebied van culinaire zaken.	○	○	○	○	○
h. Vrienden geven mij regelmatig goed advies over culinaire zaken.	○	○	○	○	○

39. Hierna volgt een aantal stellingen over uw koopgedrag in het algemeen (dus niet alleen op culinair gebied). Kunt u aangeven in hoeverre u het met de stellingen eens bent?

	helemaal mee oneens	-	niet mee oneens/niet mee eens	-	helemaal mee eens
a. Ik koop geen trendy artikelen voordat ik weet dat mijn vrienden ze goedkeuren.	○	○	○	○	○
b. Voor mij is het belangrijk dat de producten die ik koop door mensen in mijn omgeving gewaardeerd worden.	○	○	○	○	○
c. Ik kies voor merken waarvan ik weet dat ze door mijn vrienden goedgekeurd worden.	○	○	○	○	○
d. In het bijzijn van anderen, koop ik de merken die ze van mij verwachten.	○	○	○	○	○
e. Ik wil graag weten welke producten een goede indruk maken op mensen in mijn omgeving.	○	○	○	○	○
f. Ik heb het gevoel dat ik erbij hoor als ik een product koop dat anderen ook kopen.	○	○	○	○	○
g. Als ik op iemand wil lijken, dan probeer ik dezelfde merken te kopen als die persoon.	○	○	○	○	○
h. Ik herken mijzelf in mensen die dezelfde producten en merken kopen als ik.	○	○	○	○	○
i. Om zeker te weten dat ik het juiste product koop, kijk ik naar wat andere mensen gebruiken.	○	○	○	○	○
j. Als ik een product niet goed ken, dan vraag ik mijn vrienden om hun ervaringen.	○	○	○	○	○
k. Ik schakel vaak de hulp in van mensen uit mijn omgeving om de beste keuze te kunnen maken uit een aanbod van gelijkwaardige producten.	○	○	○	○	○
l. Ik vraag vaak advies aan familie of vrienden voordat ik een product koop.	○	○	○	○	○

40. Hierna volgt een opsomming van dingen die mensen belangrijk kunnen vinden in het leven. Kunt u aangeven hoe belangrijk deze dingen voor u zijn?

	heel onbelangrijk	-	niet onbelangrijk/niet belangrijk	-	heel belangrijk
a. Het gevoel erbij te horen	○	○	○	○	○
b. Spanning	○	○	○	○	○
c. Hechte relaties met anderen	○	○	○	○	○
d. Zelfontplooiing	○	○	○	○	○
e. Gewaardeerd worden	○	○	○	○	○
f. Lol en plezier in het leven	○	○	○	○	○
g. Veiligheid	○	○	○	○	○
h. Zelfrespect	○	○	○	○	○
i. Het gevoel iets te bereiken	○	○	○	○	○

41. Hoe vaak kookt u zelf gemiddeld per week?

- ○ 6-7 keer per week
- ○ 4-5 keer per week
- ○ 2-3 keer per week
- ○ 1 keer per week
- ○ Minder vaak

42. Waar doet u meestal uw boodschappen? (maximaal 2 antwoorden aankruisen)

- ☐ Supermarkt
- ☐ Speciaalzaken (bakker, slager, etc.)
- ☐ Delicatessenwinkel
- ☐ Markt
- ☐ Groothandel (bv. Makro)
- ☐ Anders

43. Wat is uw geslacht?

- ○ Man
- ○ Vrouw

44. Wat is uw leeftijd?

_____

45. Wat is uw hoogst genoten opleidingsniveau?

- ○ Geen
- ○ Basisonderwijs
- ○ Lager onderwijs (LBO/MAVO/MULO)
- ○ Middelbaar onderwijs (MBO/HAVO/VWO/HBS)
- ○ Hoger onderwijs (HBO/Universiteit)

46. Wat is uw burgerlijke staat?

- ○ Alleenstaand
- ○ Samenwonend
- ○ Getrouwd
- ○ Weduwe/Weduwnaar

47. Bent u momenteel...?

- ○ Fulltime werkend
- ○ Parttime werkend
- ○ Student
- ○ Scholier
- ○ Niet werkzaam
- ○ Anders, namelijk _____

48. Uit hoeveel personen bestaat uw huishouden?

- ○ 1 persoon
- ○ 2 personen
- ○ 3 personen
- ○ 4 personen
- ○ 5 personen of meer

49. Wat is het totale maandelijkse bruto inkomen van uw huishouden?

- ○ Minder dan 1000,- euro per maand
- ○ 1001,- tot 1500,- euro per maand
- ○ 1501,- tot 2000,- euro per maand
- ○ 2001,- tot 2500,- euro per maand
- ○ Meer dan 2501, - euro per maand
- ○ Weet ik niet/wil ik geen antwoord op geven

50. Wat is uw gebruikersnaam op SmulWeb?

51. Wat is uw emailadres?

52. Heeft u nog opmerkingen of suggesties?

Dit is het einde van de enquête. Hartelijk dank voor uw deelname. Onder de inzenders van een volledig ingevulde enquête zullen drie dinerbonnen en vier Tip Culinair kookboeken worden verloot. Vergeet niet om uw gebruikersnaam op SmulWeb en emailadres in te vullen als u hiervoor in aanmerking wilt komen. Met de winnaars wordt eind april contact opgenomen. Mochten er zich problemen voordoen met de enquête dan kunt u contact opnemen met Kristine de Valck via email: kvalck@fbk.eur.nl

Submit

APPENDIX B

Table B.1
Regression results for the cooking decision process

	Need Recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on cooking frequency	**Perceived influence on recipe knowledge**	**Perceived influence on recipe choice**	**Perceived influence on satisfaction with result**	**Average overall influence on four phases**
Membership characteristics					
Topical involvement	-0.02 (0.68)	0.01 (0.87)	-0.06 (0.28)	-0.04 (0.48)	-0.04 (0.47)
Social involvement	**0.12 (0.05)**	**0.18 (0.00)**	**0.13 (0.03)**	**0.15 (0.01)**	**0.17 (0.00)**
Length of membership	0.05 (0.25)	**0.10 (0.01)**	-0.01 (0.74)	**0.10 (0.01)**	0.07 (0.07)
Community interaction characteristics					
Frequency of visits	**0.13 (0.01)**	**0.12 (0.01)**	**0.22 (0.00)**	**0.21 (0.00)**	**0.21 (0.00)**
Duration of visits	0.05 (0.23)	-0.01 (0.88)	0.05 (0.22)	-0.01 (0.88)	0.03 (0.46)
Retrieve information	0.05 (0.30)	**0.22 (0.00)**	**0.11 (0.01)**	**0.09 (0.03)**	**0.14 (0.00)**
Supply information	-0.01 (0.91)	-0.04 (0.49)	-0.07 (0.19)	-0.01 (0.84)	-0.04 (0.46)
Discuss information	0.01 (0.78)	**-0.11 (0.02)**	-0.04 (0.38)	-0.07 (0.13)	-0.06 (0.19)
Orientation towards others					
Other-directedness	-0.02 (0.66)	-0.00 (0.91)	0.05 (0.22)	0.00 (0.97)	0.01 (0.79)
Susc. to norm. infl.	**0.20 (0.00)**	**0.16 (0.00)**	**0.12 (0.00)**	**0.16 (0.00)**	**0.19 (0.00)**
Susc. to info. infl.	0.07 (0.11)	**0.08 (0.04)**	0.03 (0.49)	0.03 (0.49)	0.06 (0.12)
Opinion leader	**-0.17 (0.00)**	-0.01 (0.92)	-0.10 (0.07)	**-0.18 (0.00)**	**-0.15 (0.00)**
Opinion seeker	**0.12 (0.01)**	**0.10 (0.02)**	**0.17 (0.00)**	**0.14 (0.00)**	**0.16 (0.00)**
Offline expertise	0.08 (0.08)	0.07 (0.08)	0.02 (0.70)	0.05 (0.23)	0.07 (0.11)
Online expertise	-0.04 (0.28)	-0.06 (0.11)	-0.02 (0.56)	-0.02 (0.62)	-0.04 (0.25)

Table B.1 (cont.)
Regression results for the cooking decision process

	Need Recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on cooking frequency	**Perceived influence on recipe knowledge**	**Perceived influence on recipe choice**	**Perceived influence on satisfaction with result**	**Average overall influence on four phases**
Internet proficiency					
Webyears	0.01 (0.88)	-0.07 (0.06)	-0.07 (0.09)	-0.04 (0.37)	-0.05 (0.19)
Webhours	0.02 (0.65)	0.01 (0.77)	-0.02 (0.62)	-0.04 (0.31)	-0.01 (0.77)
Demographics & Socioeconomic variables					
Age	**-0.12 (0.01)**	**-0.08 (0.05)**	-0.07 (0.10)	-0.03 (0.44)	**-0.09 (0.02)**
Gender	**0.09 (0.04)**	0.05 (0.23)	0.03 (0.42)	0.03 (0.49)	0.06 (0.12)
Education	-0.06 (0.12)	**-0.19 (0.00)**	-0.06 (0.18)	**-0.08 (0.04)**	**-0.11 (0.00)**
Income	0.02 (0.65)	-0.01 (0.72)	0.05 (0.21)	0.03 (0.54)	0.03 (0.48)
R^2 (total model)	0.20	0.28	0.20	0.21	0.29
Adjusted R^2 (total model)	0.17	0.26	0.17	0.18	0.27
F-statistic (total model)	7.18	11.46	7.12	9.35	11.95

The table contains standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

Table B.2
Regression results for the restaurant decision process

	Need recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on rest. visit frequency	**Perceived influence on restaurant knowledge**	**Perceived influence on restaurant choice**	**Perceived influence on satisfaction with visit**	**Average overall influence on four phases**
Membership characteristics					
Topical involvement	0.09 (0.17)	0.07 (0.27)	0.06 (0.42)	0.03 (0.64)	0.08 (0.24)
Social involvement	0.10 (0.19)	0.12 (0.11)	0.10 (0.22)	**0.21 (0.01)**	**0.16 (0.03)**
Length of membership	-0.04 (0.39)	-0.03 (0.56)	-0.03 (0.61)	-0.09 (0.09)	-0.06 (0.26)
Community interaction characteristics					
Frequency of visits	-0.04 (0.47)	0.06 (0.36)	0.03 (0.60)	-0.06 (0.36)	0.00 (0.97)
Duration of visits	-0.04 (0.45)	**-0.15 (0.01)**	-0.05 (0.41)	-0.08 (0.16)	-0.10 (0.06)
Retrieve information	**0.12 (0.04)**	**0.25 (0.00)**	**0.23 (0.00)**	**0.23 (0.00)**	**0.26 (0.00)**
Supply information	0.12 (0.09)	0.11 (0.13)	0.02 (0.84)	0.02 (0.79)	0.08 (0.28)
Discuss information	0.08 (0.19)	-0.08 (0.20)	-0.02 (0.80)	-0.04 (0.57)	-0.02 (0.69)
Orientation towards others					
Other-directedness	**-0.11 (0.03)**	0.03 (0.48)	**-0.10 (0.05)**	-0.04 (0.45)	-0.06 (0.23)
Susc. to norm. infl.	**0.17 (0.00)**	0.09 (0.06)	**0.14 (0.01)**	**0.16 (0.00)**	**0.17 (0.00)**
Susc. to info. infl.	-0.03 (0.61)	0.00 (0.98)	0.05 (0.35)	-0.05 (0.40)	-0.00 (0.94)
Opinion leader	-0.02 (0.73)	**0.14 (0.03)**	-0.06 (0.41)	-0.03 (0.69)	0.02 (0.78)
Opinion seeker	0.08 (0.16)	0.06 (0.24)	0.07 (0.24)	**0.12 (0.02)**	0.10 (0.06)
Offline expertise	0.03 (0.60)	-0.07 (0.20)	0.07 (0.27)	0.02 (0.73)	0.01 (0.88)
Online expertise	0.10 (0.06)	-0.01 (0.80)	0.04 (0.48)	**0.12 (0.03)**	0.07 (0.19)

Table B.2 (cont.)
Regression results for the restaurant decision process

	Need recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on rest. visit frequency	**Perceived influence on restaurant knowledge**	**Perceived influence on restaurant choice**	**Perceived influence on satisfaction with visit**	**Average overall influence on four phases**
Internet proficiency					
Webyears	0.09 (0.07)	0.07 (0.18)	0.09 (0.08)	0.03 (0.53)	0.09 (0.08)
Webhours	-0.02 (0.74)	0.03 (0.49)	0.00 (0.98)	0.04 (0.47)	0.02 (0.69)
Demographics & Socioeconomic variables					
Age	-0.01 (0.82)	0.07 (0.18)	0.05 (0.36)	0.06 (0.29)	0.06 (0.29)
Gender	**0.10 (0.05)**	0.02 (0.67)	0.05 (0.32)	0.09 (0.08)	0.08 (0.13)
Education	-0.05 (0.36)	-0.08 (0.11)	-0.03 (0.59)	0.01 (0.93)	-0.05 (0.34)
Income	-0.03 (0.53)	-0.03 (0.54)	0.01 (0.80)	-0.04 (0.47)	-0.03 (0.60)
R^2 (total model)	0.23	0.25	0.18	0.21	0.28
Adjusted R^2 (total model)	0.19	0.21	0.13	0.17	0.24
F-statistic (total model)	5.38	5.92	3.83	4.87	7.02

The table contains standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

Table B.3
Regression results for the kitchen utensils decision process

	Need recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on kitch. uten. purchase frequency	**Perceived influence on kitchen utensils knowledge**	**Perceived influence on kitchen utensils choice**	**Perceived influence on satisfaction with purchase**	**Average overall influence on four phases**
Membership characteristics					
Topical involvement	0.05 (0.55)	-0.08 (0.33)	-0.15 (0.08)	-0.07 (0.37)	-0.08 (0.30)
Social involvement	0.02 (0.82)	0.10 (0.29)	0.18 (0.07)	**0.21 (0.03)**	0.16 (0.08)
Length of membership	-0.13 (0.07)	-0.01 (0.83)	-0.09 (0.18)	**-0.21 (0.00)**	**-0.13 (0.05)**
Community interaction characteristics					
Frequency of visits	0.11 (0.17)	-0.02 (0.84)	-0.02 (0.82)	-0.03 (0.74)	0.01 (0.88)
Duration of visits	-0.14 (0.07)	-0.04 (0.62)	-0.03 (0.66)	0.05 (0.52)	-0.05 (0.50)
Retrieve information	**0.16 (0.03)**	**0.26 (0.00)**	**0.27 (0.00)**	**0.21 (0.01)**	**0.29 (0.00)**
Supply information	0.09 (0.34)	-0.11 (0.23)	-0.14 (0.16)	-0.16 (0.08)	-0.11 (0.23)
Discuss information	0.00 (0.97)	-0.01 (0.89)	0.02 (0.85)	0.05 (0.50)	0.02 (0.82)
Orientation towards others					
Other-directedness	0.03 (0.68)	0.03 (0.63)	0.06 (0.41)	0.06 (0.35)	0.06 (0.39)
Susc. to norm. infl.	**0.23 (0.00)**	**0.16 (0.02)**	**0.21 (0.00)**	**0.16 (0.01)**	**0.24 (0.00)**
Susc. to info. infl.	0.07 (0.33)	0.06 (0.43)	0.08 (0.31)	0.08 (0.28)	0.09 (0.21)
Opinion leader	-0.04 (0.66)	**0.24 (0.01)**	0.08 (0.37)	0.10 (0.23)	0.13 (0.11)
Opinion seeker	-0.10 (0.16)	0.02 (0.80)	-0.09 (0.18)	0.00 (0.96)	-0.05 (0.46)
Offline expertise	-0.01 (0.88)	-0.03 (0.71)	-0.01 (0.86)	-0.01 (0.90)	-0.02 (0.78)
Online expertise	0.06 (0.40)	0.03 (0.68)	0.07 (0.34)	0.11 (0.10)	0.08 (0.22)

Table B.3 (cont.)
Regression results for the kitchen utensils decision process

	Need recognition	*Search for information*	*Pre-purchase evaluation*	*Post-purchase evaluation*	*Overall influence*
	Perceived influence on kitch. uten. purchase frequency	**Perceived influence on kitchen utensils knowledge**	**Perceived influence on kitchen utensils choice**	**Perceived influence on satisfaction with purchase**	**Average overall influence on four phases**
Internet proficiency					
Webyears	0.01 (0.88)	-0.01 (0.93)	-0.02 (0.80)	0.04 (0.57)	0.01 (0.92)
Webhours	0.06 (0.37)	0.04 (0.52)	0.09 (0.18)	0.06 (0.30)	0.08 (0.21)
Demographics & Socioeconomic variables					
Age	-0.03 (0.74)	0.09 (0.23)	0.07 (0.37)	0.11 (0.14)	0.08 (0.27)
Gender	-0.00 (0.96)	-0.01 (0.86)	-0.02 (0.75)	0.01 (0.91)	-0.01 (0.88)
Education	-0.07 (0.31)	**-0.17 (0.01)**	-0.07 (0.32)	-0.09 (0.17)	**-0.13 (0.04)**
Income	0.07 (0.33)	**-0.13 (0.04)**	0.09 (0.20)	0.03 (0.64)	0.00 (0.95)
R^2 (total model)	0.19	0.24	0.22	0.25	0.29
Adjusted R^2 (total model)	0.11	0.17	0.15	0.18	0.23
F-statistic (total model)	2.50	3.46	3.01	3.64	4.47

The table contains standardized regression coefficients with P-values annotated in parentheses.
Values printed in bold are significant ($p \leq 0.05$).

APPENDIX C

Correlations among the independent variables

N = 1007	**top.invm**	**soc.invm**	**length**	**frequency**	**duration**
top.invm	1.00				
soc.invm	0.23**	1.00			
length	0.15**	0.18**	1.00		
frequency	0.14**	0.57**	0.07*	1.00	
duration	0.10**	0.40**	0.08*	0.36**	1.00
retrieve	0.30**	0.34**	0.14**	0.28**	0.23**
supply	0.24**	0.65**	0.28**	0.47**	0.32**
discuss	0.14**	0.50**	0.20**	0.38**	0.22**
otherdir	0.20**	-0.00	-0.00	-0.01	0.03
norm.inf	0.05	0.18**	-0.00	0.07*	0.04
info.inf	0.11**	0.06	-0.09**	-0.02	0.04
opn.lead	0.67**	0.24**	0.18**	0.14**	0.14**
opn.seek	0.32**	0.14**	-0.03	0.06	0.03
off.expert	0.43**	0.14**	0.14**	0.12**	0.05
on.expert	0.26**	0.30**	0.16**	0.21**	0.21**
webyears	0.00	-0.05	0.30**	-0.08*	-0.11**
webhours	0.06*	0.25**	0.11**	0.27**	0.19**
age	0.10**	0.05	0.15**	0.15**	0.04
gender	-0.09**	0.02	0.09**	0.01	-0.04
education	0.04	-0.22**	0.06	-0.21**	-0.23**
income	0.21**	-0.08	0.12**	-0.06	-0.16**

Correlations among the independent variables (cont.)

N = 1007	**retrieve**	**supply**	**discuss**	**otherdir**	**norm.inf**
retrieve	1.00				
supply	0.42**	1.00			
discuss	0.31**	0.53**	1.00		
otherdir	0.09**	-0.04	-0.03	1.00	
norm.inf	0.06	0.11**	0.08*	-0.05	1.00
info.inf	0.13**	0.03	-0.04	0.13**	0.26**
opn.lead	0.23**	0.24**	0.18**	0.12**	0.03

* significant at the 0.05 level (2-tailed).
** significant at the 0.01 level (2-tailed).

Correlations among the independent variables (cont.)

N = 1007	retrieve	supply	discuss	otherdir	norm.inf
opn.seek	0.20**	0.08*	0.01	0.18**	0.11**
off.expert	0.17**	0.20**	0.16**	0.06	0.07*
on.expert	0.20**	0.26**	0.21**	0.03	0.03
webyears	-0.02	-0.01	0.01	-0.03	-0.04
webhours	0.09**	0.22**	0.26**	-0.01	-0.01
age	-0.04	0.03	0.02	-0.06	-0.07*
gender	-0.13**	-0.01	-0.01	-0.24**	0.11**
education	-0.05	-0.15**	-0.10**	-0.01	-0.01
income	0.04	-0.01	-0.01	-0.01	-0.16**

Correlations among the independent variables (cont.)

N = 1007	info.inf	opn.lead	opn.seek	off.expert	on.expert
info.inf	1.00				
opn.lead	0.12**	1.00			
opn.seek	0.33**	0.26**	1.00		
off.expert	0.03	0.47**	0.10**	1.00	
on.expert	-0.01	0.32**	0.04	0.24**	1.00
webyears	-0.01	0.04	-0.06*	0.03	0.04
webhours	-0.06	0.10**	-0.03	0.07*	0.09**
age	-0.14**	0.13**	-0.01	-0.01	0.05
gender	-0.11**	-0.01	-0.10**	-0.01	-0.01
education	0.07*	0.03	-0.03	0.11**	-0.06
income	-0.03	0.13**	0.01	0.08*	0.07

Correlations among the independent variables (cont.)

N = 1007	webyears	webhours	age	gender	education	income
webyears	1.00					
webhours	0.15**	1.00				
age	-0.13**	0.12**	1.00			
gender	0.10**	0.10**	0.30**	1.00		
education	0.21**	-0.06	-0.19**	-0.04	1.00	
income	0.10*	-0.08	0.23**	0.03	0.21**	1.00

* significant at the 0.05 level (2-tailed).
** significant at the 0.01 level (2-tailed).

APPENDIX D

Comparison of the cooking, restaurant, and kitchen utensils samples

The cooking sample consists of our entire sample of respondents described in Chapter 4. The restaurant sample consists of a subset of 630 respondents, whose last restaurant visit took place no longer than one month prior to filling our the survey. The kitchen utensils sample consists of a subset of 400 respondents, whose last kitchen utensils purchase took place no longer than six months prior to filling out the survey. In total, 277 respondents are part of all three groups. In this Appendix, we compare the scores of the three sample groups on the independent variables of our research framework in Chapter 5. Our goal is to examine whether there are differences between the groups. Knowledge about specific sample characteristics could enhance the interpretation of our regression analyses.

The results are summarized in Tables D.1 and D2. Although we do not find major differences, we can detect several tendencies that shed light on the specific character of each sample group. The descriptives in Table D.1 make clear that the kitchen utensils sample has the largest percentage of longtime members. This sample group also scores relatively higher on number of years Internet usage and weekly number of hours online, although differences are small. Compared with the base group, the category of members who are 20-40 years of age is bigger in the kitchen utensils sample, whereas the category of members who are 40-60 years of age is smaller. For gender we find that the kitchen utensils sample contains even more women and fewer men than the base group. We find that the restaurant sample tends to visit the virtual community less often and its overall visit duration also tends to be shorter compared with the other sample groups. The restaurant and kitchen utensils samples both differ from the base group in terms of level of education and income. Both sample groups have the largest percentages of higher educated members, whereas the cooking sample has the largest percentage of intermediate educated members. In the base group the lower income categories are relatively better represented than in the restaurant and kitchen utensils groups.

Table D.1
Descriptives for the three sample groups

		Cooking N = 1007	Restaurants N = 630	Kitchen utensils N = 400
Length of membership	< 1 year	41%	41%	39%
	1 < 2 years	36%	35%	35%
	≥ 2 years	23%	24%	26%
Frequency of visits	monthly	25%	29%	26%
	weekly	44%	42%	40%
	daily	31%	29%	34%
Duration of visits	< 30 minutes	54%	56%	55%
	30 < 60 min.	31%	32%	32%
	60 < 90 min.	10%	8%	10%
	≥ 90 minutes	5%	4%	5%
Years Internet usage	< 1 year	2%	2%	3%
	1 < 3 years	29%	27%	25%
	3 < 5 years	48%	49%	51%
	≥ 5 years	21%	22%	21%
Hours weekly online	< 5 hours	21%	22%	19%
	5 < 10 hours	23%	23%	25%
	10 <15 hours	17%	18%	16%
	≥ 15 hours	39%	37%	40%
Age	< 20	4%	4%	3%
	20 < 40	55%	57%	59%
	40 < 60	39%	37%	36%
	≥ 60	2%	2%	2%
Gender	male	15%	14%	12%
	female	85%	86%	88%
Education	lower	13%	9%	10%
	intermediate	44%	42%	43%
	higher	43%	49%	47%
Income	< 1500 €	16 %	12%	14%
	1500 < 2500 €	43%	40%	40%
	≥ 2500 €	41%	48%	46%

Table D.2
Continuous variables for the three sample groups

	Cooking N = 1007	Restaurants N = 630	Kitchen utensils N = 400
Topical involvement	**4.02 (0.73)**	**4.11 (0.68)**	**4.15 (0.68)**
Social involvement	2.20 (1.02)	2.13 (0.98)	2.28 (1.06)
Retrieve information	2.80 (0.74)	2.79 (0.74)	2.85 (0.73)
Supply information	1.89 (0.88)	1.85 (0.87)	1.93 (0.91)
Discuss information	1.35 (0.66)	1.30 (0.60)	1.34 (0.61)
Other-directedness	4.34 (0.87)	4.42 (0.80)	4.42 (0.81)
Susceptibility to normative influence	1.34 (0.59)	1.32 (0.55)	1.29 (0.55)
Susceptibility to informational influence	2.71 (1.10)	2.78 (1.07)	2.85 (1.11)
Opinion leader	**3.49 (1.06)**	**3.60 (1.02)**	**3.65 (0.99)**
Opinion seeker	**3.40 (1.03)**	**3.45 (0.98)**	**3.55 (1.00)**
Offline expertise	3.94 (0.73)	3.97 (0.72)	4.01 (0.70)
Online expertise	2.71 (0.97)	2.69 (0.94)	2.76 (0.96)

Scores are measured on 5-point rating scales (1-5). Standard deviations are annotated in parentheses. Values printed in bold denote that scores between the sample groups are significantly ($p < 0.05$) different.

Table D.2 contains the mean scores of the three sample groups on the continuous variables in our framework. Again, we find no major differences between the sample groups. Differences between groups are only significant for the variables topical involvement ($F = 6.19$, $p = 0.00$), opinion leadership ($F = 4.37$, $p = 0.01$), and opinion seeking behavior ($F = 3.13$, $p = 0.04$). The kitchen utensils sample has the highest mean scores for these three variables. This indicates that this sample, more than the other groups, can be characterized as culinary enthusiasts inclined to increase their knowledge about culinary matters and share their

experiences with others. This characterization is further supported if we compare results for the other variables. It is the kitchen utensils sample that scores highest on social involvement, retrieve and supply information, and susceptibility to informational interpersonal influence, while respondents in this sample also characterize themselves to the largest extent as having more culinary expertise than others both in the offline as well as online context. Although, the mean scores for these variables do not significantly differ from the other sample groups, it makes clear that this sample group, overall, consists of dedicated, culinary knowledgeable, members who actively participate in the information exchange within the community.

The restaurant sample respondents, on the other hand, make limited use of their virtual community membership compared with the other groups. Although they score significantly higher than the base group in terms of topical involvement and culinary opinion leadership, they are least engaged in retrieving, supplying, and discussing information within the community. Their social involvement in the community is, relatively speaking, lower than that of the other sample groups.

APPENDIX E

Final cluster seeds of non-hierarchical analyses of three-cluster solution

ORDER A			
	Cluster 1	**Cluster 2**	**Cluster 3**
	$n_1 = 528$	$n_2 = 345$	$n_3 = 134$
Frequency of visits	-0.65	0.59	1.04
Duration of visits	-0.42	0.37	0.72
Retrieve information	-0.50	0.41	0.90
Supply information	-0.64	0.41	1.46
Discuss information	-0.43	-0.18	2.15

The table contains average *z*-scores.

ORDER B			
	Cluster 1	**Cluster 2**	**Cluster 3**
	$n_1 = 521$	$n_2 = 343$	$n_3 = 143$
Frequency of visits	-0.66	0.56	1.06
Duration of visits	-0.43	0.37	0.68
Retrieve information	-0.50	0.40	0.88
Supply information	-0.63	0.35	1.48
Discuss information	-0.43	-0.20	2.05

The table contains average *z*-scores.

ORDER C			
	Cluster 1	**Cluster 2**	**Cluster 3**
	$n_1 = 547$	$n_2 = 333$	$n_3 = 127$
Frequency of visits	-0.62	0.62	1.04
Duration of visits	-0.40	0.37	0.76
Retrieve information	-0.48	0.46	0.88
Supply information	-0.63	0.46	1.50
Discuss information	-0.43	-0.14	2.21

The table contains average *z*-scores.

Final cluster seeds of non-hierarchical analyses of four-cluster solution

ORDER A				
	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**
	$n_1 = 122$	$n_2 = 471$	$n_3 = 208$	$n_4 = 206$
Frequency of visits	1.10	-0.76	0.74	0.34
Duration of visits	0.75	-0.50	0.50	0.19
Retrieve information	0.83	-0.47	-0.40	0.98
Supply information	1.49	-0.63	-0.22	0.78
Discuss information	2.26	-0.43	-0.22	-0.13

The table contains average *z*-scores.

ORDER B				
	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**
	$n_1 = 134$	$n_2 = 441$	$n_3 = 201$	$n_4 = 231$
Frequency of visits	1.11	-0.68	0.89	-0.12
Duration of visits	0.72	-0.49	0.78	-0.17
Retrieve information	0.90	-0.66	-0.21	0.92
Supply information	1.53	-0.67	0.16	0.26
Discuss information	2.08	-0.45	-0.21	-0.17

The table contains average *z*-scores.

ORDER C				
	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**
	$n_1 = 138$	$n_2 = 438$	$n_3 = 191$	$n_4 = 240$
Frequency of visits	1.10	-0.69	0.91	-0.10
Duration of visits	0.71	-0.49	0.83	-0.17
Retrieve information	0.86	-0.67	-0.21	0.88
Supply information	1.50	-0.67	0.18	0.22
Discuss information	2.06	-0.45	-0.26	-0.16

The table contains average *z*-scores.

Final cluster seeds of non-hierarchical analyses of five-cluster solution

	Cluster 1 $n_1 = 437$	**Cluster 2** $n_2 = 184$	**Cluster 3** $n_3 = 55$	**Cluster 4** $n_4 = 106$	**Cluster 5** $n_5 = 225$
Frequency of visits	-0.69	0.96	1.43	0.79	-0.17
Duration of visits	-0.48	0.84	1.93	-0.26	-0.10
Retrieve information	-0.67	-0.21	1.25	0.60	0.89
Supply information	-0.67	0.24	1.93	1.10	0.12
Discuss information	-0.45	-0.27	2.31	1.68	-0.27

The table contains average *z*-scores.

ORDER B

	Cluster 1 $n_1 = 383$	**Cluster 2** $n_2 = 192$	**Cluster 3** $n_3 = 79$	**Cluster 4** $n_4 = 115$	**Cluster 5** $n_5 = 238$
Frequency of visits	-0.77	0.63	1.33	0.97	-0.18
Duration of visits	-0.57	0.31	1.62	0.43	-0.07
Retrieve information	-0.68	-0.54	0.71	0.85	0.89
Supply information	-0.69	-0.15	1.28	1.44	0.11
Discuss information	-0.45	-0.23	0.05	2.31	-0.22

The table contains average *z*-scores.

ORDER C

	Cluster 1 $n_1 = 437$	**Cluster 2** $n_2 = 183$	**Cluster 3** $n_3 = 55$	**Cluster 4** $n_4 = 107$	**Cluster 5** $n_5 = 225$
Frequency of visits	-0.69	0.96	1.43	0.79	-0.17
Duration of visits	-0.48	0.84	1.93	-0.26	-0.10
Retrieve information	-0.67	-0.21	1.25	0.60	0.89
Supply information	-0.67	0.24	1.93	1.08	0.12
Discuss information	-0.45	-0.28	2.31	1.68	-0.27

The table contains average *z*-scores.

Final cluster seeds of non-hierarchical analyses of six-cluster solution

ORDER A						
	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**	**Cluster 5**	**Cluster 6**
	$n_1 = 51$	$n_2 = 91$	$n_3 = 163$	$n_4 = 154$	$n_5 = 240$	$n_6 = 308$
Frequency of visits	1.43	0.78	0.52	0.85	-0.62	-0.68
Duration of visits	2.01	-0.22	0.05	0.90	-0.17	-0.61
Retrieve information	1.26	0.55	0.89	-0.41	0.41	-0.96
Supply information	1.95	1.02	0.89	-0.02	-0.58	-0.63
Discuss information	2.33	1.99	-0.20	-0.24	-0.40	-0.43

The table contains average *z*-scores.

ORDER B						
	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**	**Cluster 5**	**Cluster 6**
	$n_1 = 55$	$n_2 = 97$	$n_3 = 156$	$n_4 = 160$	$n_5 = 282$	$n_6 = 257$
Frequency of visits	1.46	0.63	0.24	1.03	-0.53	-0.76
Duration of visits	1.88	-0.29	0.06	0.86	-0.25	-0.59
Retrieve information	1.23	0.49	0.92	-0.27	0.23	-1.09
Supply information	1.93	0.91	0.93	0.07	-0.65	-0.65
Discuss information	2.41	1.82	-0.21	-0.23	-0.45	-0.44

The table contains average *z*-scores.

ORDER C						
	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**	**Cluster 5**	**Cluster 6**
	$n_1 = 59$	$n_2 = 102$	$n_3 = 144$	$n_4 = 169$	$n_5 = 281$	$n_6 = 252$
Frequency of visits	1.48	0.51	0.40	0.90	-0.55	-0.78
Duration of visits	1.79	-0.31	0.13	0.79	-0.27	-0.61
Retrieve information	1.05	0.51	1.07	-0.38	0.25	-1.09
Supply information	1.79	0.87	0.95	0.06	-0.61	-0.67
Discuss information	2.50	1.68	-0.25	-0.26	-0.46	-0.44

The table contains average *z*-scores.

APPENDIX F

Final cluster seeds of relative validity test of six-cluster solution

Sample 1 (n = 494) with initial seed points from final solution of entire sample

	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**	**Cluster 5**	**Cluster 6**
	$n_1 = 19$	$n_2 = 40$	$n_3 = 91$	$n_4 = 79$	$n_5 = 114$	$n_6 = 151$
Frequency of visits	1.30	0.78	0.57	0.96	-0.59	-0.68
Duration of visits	2.16	-0.33	0.01	0.89	-0.20	-0.59
Retrieve information	1.27	0.49	0.86	-0.44	0.33	-0.97
Supply information	1.87	1.14	0.90	0.02	-0.56	-0.60
Discuss information	2.42	2.00	-0.23	-0.25	-0.41	-0.40

The table contains average *z*-scores.

Sample 2 (n = 513) classification A with initial seed points from first sub-sample

	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**	**Cluster 5**	**Cluster 6**
	$n_1 = 31$	$n_2 = 51$	$n_3 = 71$	$n_4 = 74$	$n_5 = 130$	$n_6 = 156$
Frequency of visits	1.51	0.78	0.43	0.82	-0.63	-0.70
Duration of visits	1.97	-0.14	0.12	0.88	-0.15	-0.61
Retrieve information	1.25	0.63	0.94	-0.38	0.48	-0.96
Supply information	1.98	0.95	0.90	0.03	-0.60	-0.66
Discuss information	2.30	1.97	-0.17	-0.21	-0.39	-0.46

The table contains average *z*-scores.

Sample 2 (n = 513) classification B with initial seed points from final solution of entire sample

	Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**	**Cluster 5**	**Cluster 6**
	$n_1 = 32$	$n_2 = 51$	$n_3 = 72$	$n_4 = 75$	$n_5 = 126$	$n_6 = 157$
Frequency of visits	1.51	0.79	0.45	0.72	-0.65	-0.69
Duration of visits	1.92	-0.12	0.11	0.91	-0.15	-0.63
Retrieve information	1.27	0.59	0.93	-0.38	0.49	-0.95
Supply information	1.99	0.92	0.89	0.06	-0.60	-0.67
Discuss information	2.28	1.97	-0.16	-0.24	-0.40	-0.46

The table contains average *z*-scores.

APPENDIX G

Overview of the 53 discussion threads selected for analysis

Topic	Forum[a]: Date of first & last contribution	Discussion starter[b]	Number of reactions
What was your Christmas dinner?	CF: 28/12 – 02/01	Donna	11
List of favorite recipes	CF: 02/01 – 04/01	Rachel	37
Traditional or exotic cuisine	GF: 05/02 – 06/02	Neil	30
Pre-processed pesto	CF: 07/02 – 19/02	Scott	141
Struggling with small kitchen space	CF: 10/02 – 10/02	Rachel	48
Making everything fresh is impossible	CF: 11/02 – 14/02	Nicole	88
Lunch menus	GF: 25/02 – 04/03	Neil	76
How should you develop children's taste?	CF: 06/03 – 10/03	Jennifer	46
What is a good cook?	CF: 18/03 – 19/03	Rachel	97
Simplicity in restaurant menus and home	CF: 20/03 – 19/04	Nicole	81
Culinary traditions	CF: 30/03 – 08/04	Neil	154
Guests who don't like your food	CF: 02/04 – 04/04	Nicole	102
Cooking on holiday	CF: 22/04 – 24/04	Neil	56
Demanding culinary experts	CF: 03/05 – 19/05	Rachel	170
Violating copyright	GF: 13/05 – 15/05	Clair	179
Nightly appetite	GF: 16/05 – 17/05	Kevin	339
Managing your online recipe collection	CF: 16/06 – 16/06	Susan	13
Tricks to get your recipe favorite	CF: 30/06 – 01/07	Mary	41
Learning table manners	CF: 09/07 – 16/07	Neil	21
Dressing up dishes	CF: 17/07 – 19/07	Neil	58
Copying recipes contest	CF: 22/07 – 22/07	Lucy	2
Who likes cooking?	CF: 26/07 – 30/07	Brenda	25
For who do you like to cook?	CF: 26/07 – 28/07	Neil	34
Copying recipes	CF: 28/07 – 30/08	Harry	131
Expensive wine	GF: 30/07 – 13/08	Betty	93
Starter kits for meals	CF: 31/07 – 31/07	Neil	37
Is pizza junk food or not?	CF: 05/08 – 07/08	Neil	50
Dutch cuisine	GF: 22/08 – 23/08	Michael	82
Using ready-made products	CF: 22/08 – 24/08	Jil	51
Repulsive table manners	CF: 23/08 – 24/08	Neil	20
Illegally copied articles	CF: 24/08 – 25/08	Linda	59

[a] CF = Culinary Forum; GF = General Forum; QF = Question and Answer Forum
[b] Member names are pseudonyms.

Overview of the 53 discussion threads selected for analysis (cont.)

Topic	Forum[a]: Date of first & last contribution	Discussion starter[b]	Number of reactions
Collecting recipes	CF: 24/08 – 30/08	Helen	27
Illegally copied articles: follow-up	CF: 26/08 – 27/08	Linda	9
Opting for healthy or easy meals	CF: 27/08 – 29/08	Clair	33
Fast food	CF: 28/08 – 29/08	Julia	88
Listening to music while cooking	CF: 02/09 – 02/09	Neil	18
Word-to-mouth recommendations	CF: 06/09 – 07/09	Neil	22
Who taught you how to cook?	CF: 10/09 – 12/09	Nicole	23
Hosts who can't cook	CF: 11/09 – 11/09	Neil	22
Learning kids to cook	CF: 11/09 – 17/09	Neil	20
What do you serve guests from abroad?	CF: 30/09 – 02/10	Neil	14
Expensive products	GF: 21/10 – 23/10	Brian	104
Who still prepares traditional dishes?	GF: 22/10 – 24/10	Eve	65
Time spent cooking	CF: 13/11 – 22/11	Bill	71
What is the culinary trend in 2004?	CF: 14/11 – 02/12	George	26
Plundering the fridge	CF: 21/11 – 23/11	Nicole	59
Fixed seat at the table	CF: 26/11 – 27/11	Neil	22
Dishes for specific occasions	CF: 28/11 – 28/11	Nicole	18
Good and cheap dishes	CF: 29/11 – 06/12	Neil	58
Pure taste	CF: 01/12 – 02/12	Nicole	22
Drinking while cooking	QF: 07/12 – 09/12	Lillian	11
Traditional Christmas cuisine	CF: 18/12 – 20/12	Lillian	32
Favorite Christmas menus	CF: 28/12 – 30/12	Emma	27

[a] CF = Culinary Forum; GF = General Forum; QF = Question and Answer Forum
[b] Member names are pseudonyms.

Curriculum Vitae

Kristine de Valck (Rotterdam, 1974) received her gymnasium diploma in 1992 at Marnix Gymnasium Rotterdam. She studied Theater-, Film- and Television studies at the University of Utrecht. During one academic year she was an exchange student in the Communication Arts Department of the University of Wisconsin-Madison, U.S.A. She obtained her Master of Arts degree 'cum laude' in 1997. Her master thesis 'Neighborhood Cinemas in Rotterdam; Cinema Theaters in the Context of the Modernisation of Society and the Formation of a New Social Order, 1908-1920' was awarded the Prof. dr. Peters Price 1998 for the best master thesis in the Netherlands and Belgium in the field of audiovisual media research. After a short professional career working for a Dutch broadcasting company, she returned to academia and started her Ph.D. at the Erasmus Research Institute of Management, Erasmus University Rotterdam in 1999. Her research focus has broadened from the 'traditional media' to the 'new media', specifically the Internet and virtual communities. She has presented her research on marketing and consumer behavior conferences in Europe and North America. Currently, she is an assistant professor in marketing at HEC School of Management, Paris. Her research continues to focus on online consumer behavior, interpersonal influence, word-of-'mouse', and using the Internet as a research tool.

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Virtual Communities of Consumption:
Networks of Consumer Knowledge and Companionship

Marketers have to deal with consumers who increasingly interact with other consumers through the Internet. Electronically based discussion forums, bulletin boards, list servers, chat rooms, and newsgroups provide consumers worldwide with the ability to share their knowledge, experiences, and opinions. The popularity of electronic consumer exchanges is reflected in the vast number of virtual communities that specifically focus on consumption-related interests. These virtual communities of consumption represent substantial networks of consumer knowledge and companionship that affect consumer behavior. This dissertation presents three empirical studies that offer systematic insight in various aspects of virtual community participation and its effects on consumer decision-making. It establishes that members attach more value to the virtual community as a source of information than to other sources including traditional media. Furthermore, it demonstrates that virtual communities increase consumer knowledge and alter choice behavior. An analysis of member participation patterns has resulted in a member typology that enables marketers to locate interesting target segments and that offers insights in how to address them. Finally, the dissertation presents an illustration of online forum discussion practices that highlights how discussants communicate with, and actively try to influence, each other. It shows that members share an interest in the community's focal topic, but that their related opinions and behaviors greatly differ. Ultimately, to the benefit of both academics and marketers, the dissertation provides a better understanding of the functioning of virtual communities as sites of interpersonal influence.

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